UPDATE INFORMATION

BVW-60P(EK, UC)

MODEL NAME Maintenance Manual Vol.2
REVISION NO. 1st Edition Revised 13
DATE 1992.9

Rev. No.	S. No.	Action	Page
E1 R12	11688-11738	Replace	16-7(b) to 10(b), 43(c) to 46(c), 105(b) to 108(b), 113(b) to 116(b), 133 to 136, 269 to 272, 309 to 312, 317 to 320
			17-27(b) to 30(b), 141 to 144
			18-27
			19-7 to 9, 20 to 22, 26(b) to 28(b), 32 to 34, 35 to 37, 41 to 43, 47 to 48, 56, 57, 67, 72, 73, 79, 82, 87, 90, 106, 108, 110, 114, 115
		Add	16-136-1
E1 R13	11739 and higher	Replace	-2-, -3-, -4-
			15-5 to 8, 13(c) to 16(c)
			16-1, 2, 22(c) to 24(c), 29(c) to 32(c), 36(c) to 38(c), 73(b) to 76(b), 133 to 136, 253 to 256, 261 to 264, 276 to 278, 282 to 284, 289 to 292, 340 to 342
			17-1, 2, 11(c) to 14(c), 125 to 128, 133 to 136
			19-35 to 37, 57, 67, 73, 81, 88, 89, 90, 105, 112, 119
		Add	16-22(d) to 24(d), 29(d) to 32(d), 36(d) to 38(d), 38(d)-1
			17-11(d) to 14(d)
			19-94 to 98

1) "Rev. No." is the corresponding revised number of the service manual for the customer.
E1 R1 means 1st Edition Revised 1.
"Serial Number" is the serial number range which the Rev.No. in the left column covers.

2) The changed portions are indicated by a dotted line and/or "**" (double asterisk).

3) "N.A." in the serial number column means there is no machine covering this revision.
The machine for the different market, e.g. Japan, may exist for this manual revision.

16. SCHEMATIC DIAGRAM

Circuit Configuration 16-1

VIDEO/TBC

DM-56P (1/2) 16-7
DM-56P (2/2) 16-15
DUS-259
DUS-269
DUS-288
EQ-26
EQ-28
TBC-7P/7D/7E (1/3) 16-22
** TBC-7P/7D/7E (2/3) 16-29
TBC-7P/7D/7E (3/3) 16-36
SW-261
TBC-8P (1/3) .... 16-43(a)
TBC-8P (1/3) .... 16-43(b)
TBC-12P (1/3) .... 16-43(c)
TBC-8P (2/3) .... 16-50(a)
TBC-8P (2/3) .... 16-50(b)
TBC-12P (2/3) .... 16-50(c)
TBC-8P (3/3) .... 16-57(a)
NR-25
TBC-8P (3/3) .... 16-57(b)
NR-25
TBC-12P (3/3) .... 16-57(c)
NR-32 .... 16-60(c) -2
TBC-9P (1/2) 16-65
TBC-9P (2/2) 16-73
EN-48P (1/3) 16-81
EN-48P (2/3) 16-89
EN-48P (3/3) 16-97
VO-18AP (1/3) 16-105
VO-18AP (2/3) 16-113
VO-18AP (3/3)
DUS-270
DEC-39A 16-120
CP-101AP 16-126
CP-103AP

AUDIO

AU-118P 16-133
AFM-1A 16-141
FL-61
BF-28A (1/2) 16-148
VR-42
BF-28A (2/2) 16-154
CP-111 (1/4) .... 16-161(a)
CP-113
CP-111 (2/4) .... 16-169(a)
CP-113
CP-111 (3/4) .... 16-177(a)
CP-113
CP-111 (4/4) .... 16-185(a)
HP-33
VR-62
CP-161A (1/4) .... 16-161(b)
CP-161A (2/4) .... 16-169(b)
CP-161A (3/4) .... 16-177(b)
CP-161A (4/4) .... 16-185(b)
HP-33
VR-62
SW-144A 16-193
VR-61
DP-72
DP-74
DP-73

SERVO

SV-82A (1/2) 16-200
SV-82A (2/2) 16-206
SV-83B (1/2) 16-212
SV-83B (2/2) 16-218
SV-84P (1/2) 16-224
SV-84P (2/2) 16-230
RE-28 16-237
PTC-20
PTC-21
PTC-36
DR-56
RE-36 16-245
RM-40
DE-15
SE-57
PTC-31

SYSTEM CONTROL

SY-61A (1/3) ········ 16-253
SY-61A (2/3) ········ 16-261
SY-61A (3/3)
DUS-570 **
SY-64AP (1/5) ········ 16-269
SY-64AP (2/5) ········ 16-276
SY-64AP (3/5) ········ 16-282
SY-64AP (4/5) ········ 16-289
SY-64AP (5/5)
PD-35 ········ 16-296
PTC-15
RM-57
CL-14 ········ 16-302
CL-24
CCM-2
PC-32
PC-33
PC-41
PC-47
HC-11

CONTROL PANEL

KY-96C ········ 16-309
KY-107A
DP-71A
PTC-32
PT-9

TIME CODE

TC-40AP ········ 16-317

POWER SUPPLY

AC-81/96 ········ 16-325
M1
M2
C1
C2

FRAME

MB-191C (1/4) ········ 16-333
MB-191C (2/4) ········ 16-340
MB-191C (3/4) ········ 16-346
MB-191C (4/4) ········ 16-352
MB-192 ········ 16-358
FRAME (1/5) ········ 16-364
FRAME (2/5) ········ 16-367
FRAME (3/5) ········ 16-370
FRAME (4/5) ········ 16-373
FRAME (5/5) ········ 16-376

17. PRINTED WIRING BOARDS

Circuit Configuration ········ 17-1

VIDEO/TBC

DM-56P ········ 17-3
DUS-259
DUS-269
DUS-288 ········ 17-3(a)
EQ-26
EQ-28
** TBC-7P/7D/7E ········ 17-11
SW-261
TBC-8P ········ 17-19(a)
TBC-8P ········ 17-19(b)
TBC-12P ········ 17-19(c)
TBC-9P ········ 17-27(a)
NR-25
TBC-9P ········ 17-27(b)
NR-32
EN-48P ········ 17-35
VO-18P/18AP ········ 17-41(a)
VO-18AP ········ 17-41(b)
DUS-270
DEC-39A ········ 17-47
CP-103AP ········ 17-53
CP-101AP ········ 17-59

AUDIO

AU-118P ········ 17-65
AFM-1A ········ 17-71
FL-61
BF-28A ········ 17-77
VR-42
CP-111 ········ 17-83(a)
CP-113
HP-33
VR-62
CP-161A ········ 17-83(b)
HP-33
VR-62

SW-144A ················ 17-91
VR-61
DP-72
DP-73
DP-74

SERVO

SV-82/82A ································· 17-99
SV-83/83A/83B ····························· 17-105
SV-84P ···································· 17-111
RE-28 ················ 17-117
RE-36
DR-56
PTC-20
PTC-21
PTC-36
DE-15
RM-40
TR-18

SYSTEM CONTROL

** SY-61/61A/61B/61C ················ 17-125
DUS-570
SY-64AP ·································· 17-133

CONTROL PANEL

KY-96B/96C ················ 17-141
KY-107/107A
DP-71A
PTC-32
PT-9

TIME CODE

TC-40AP ·································· 17-149
SE-57 ················ 17-155
PTC-31
PTC-15
PD-35
RM-57
CL-14
CL-24
CCM-2
PC-32
PC-33
PC-41
PC-47
HC-11

POWER SUPPLY

AC-81/96 ················ 17-163
M1
M2
C1
C2

FRAME

MB-191/191A/191B/191C ················ 17-171
MB-192

18. SEMICONDUCTOR ELECTRODES

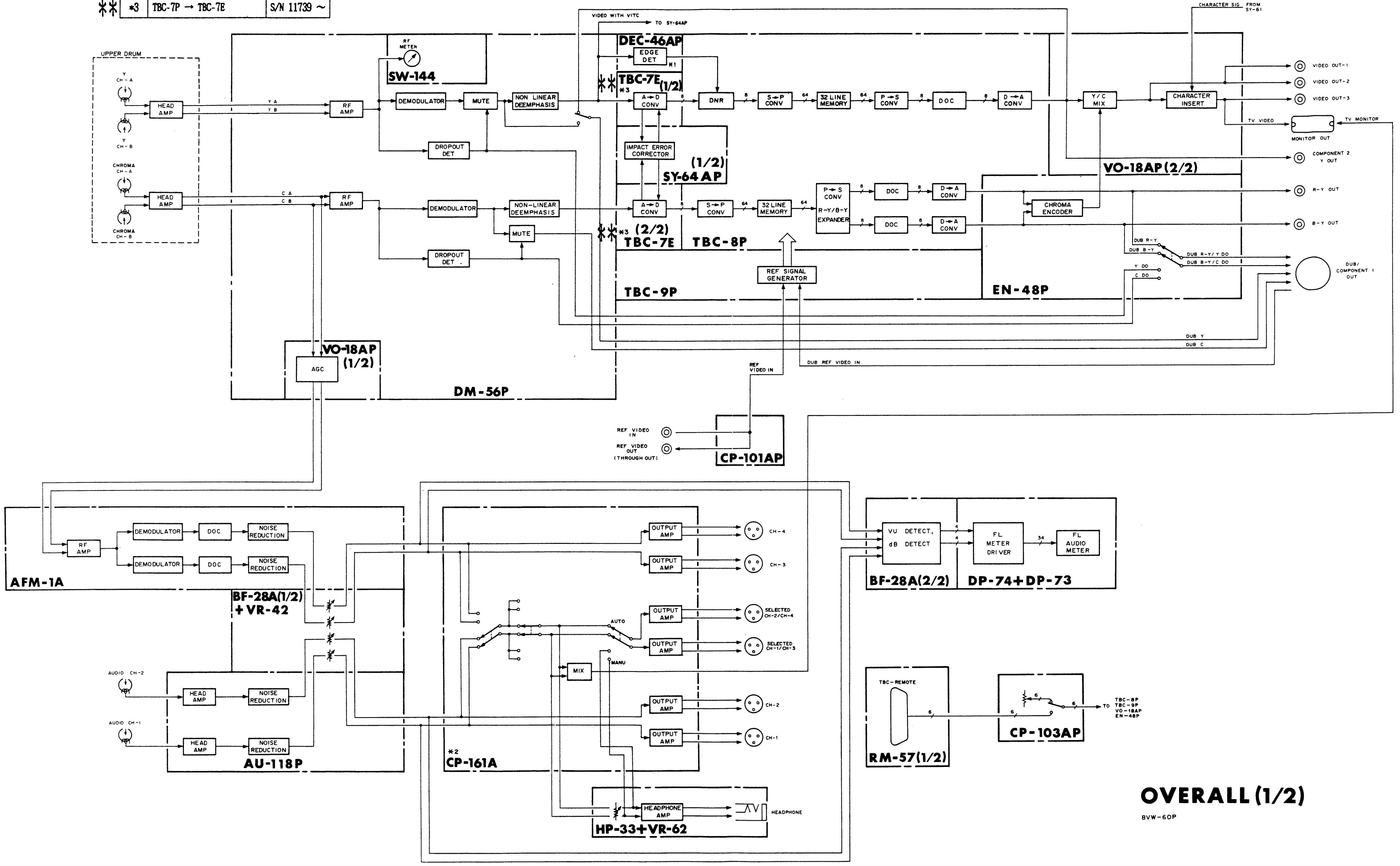
19. SPARE PARTS AND FIXTURE

19-1. Parts Information ······················· 19-1
19-2. Exploded View ·························· 19-1
Supply Side Reel Chassis ················ 19-3
Take-up Side Reel Chassis ·············· 19-5
Head Drum, Stationary Heads and Tape Guides Block ····················· 19-7
Threading Ring Block ·················· 19-10
T Drawer Arm Block ···················· 19-13
Supply Tension Regulator Block ········ 19-15
Pinch Press Mechanism Block ·········· 19-17
Function Control Chassis Block ········ 19-20
Level Control Chassis Block ············ 19-23
Cassette-up Compartment ·············· 19-26
Connector Panel Block ················· 19-29
Switching Regulator Block ·············· 19-32
Printed Circuit Block (1) ··············· 19-35
Printed Circuit Block (2) ··············· 19-38
Ornamental Panel Block ················ 19-41
19-3. Electrical Parts List ···················· 19-47
19-4. Packing Material and Accessories (Supplied) ·················· 19-119
19-5. Fixture (Option) ························ 19-119

OVERALL

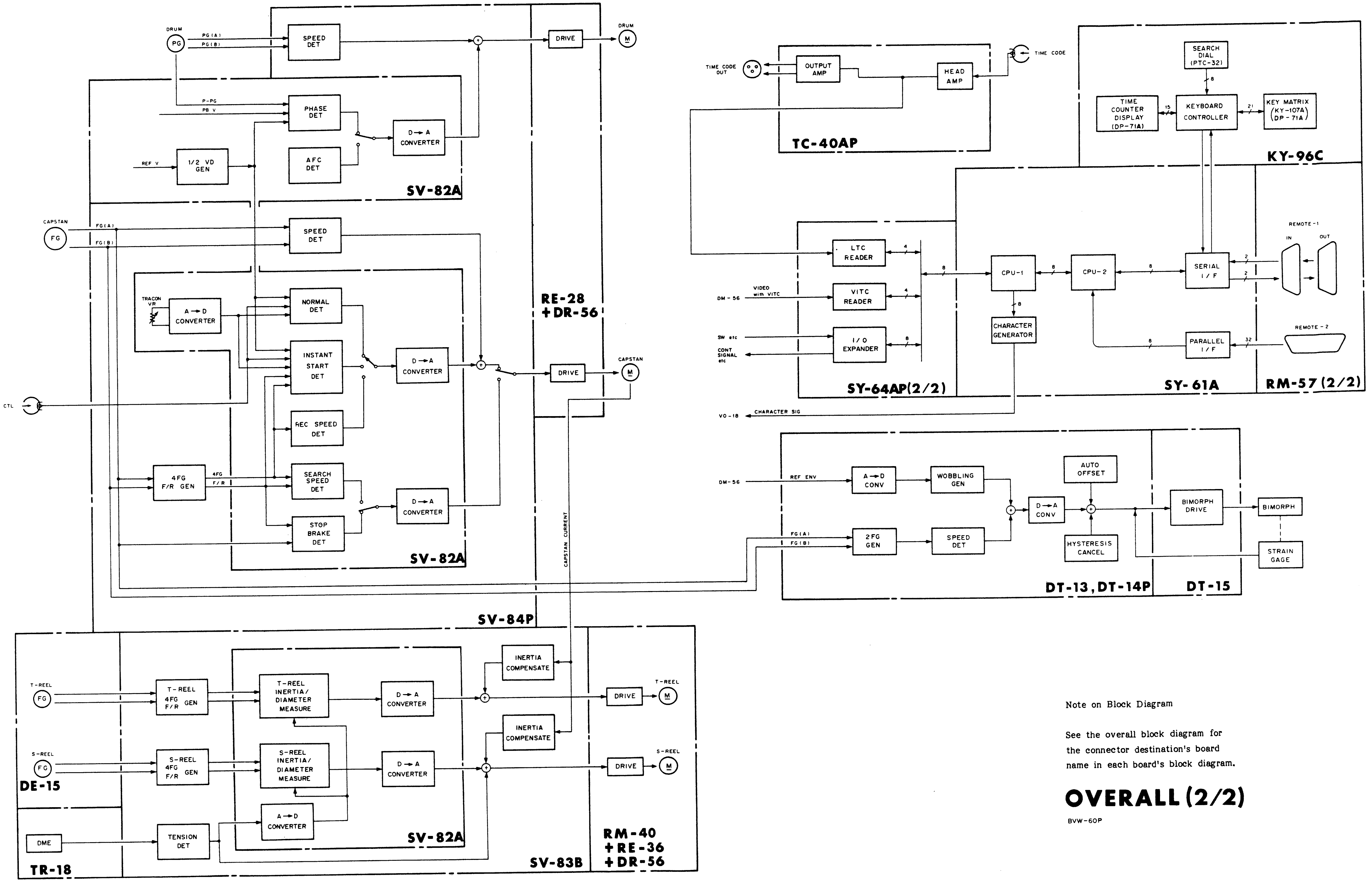
NOTE

MARK	CHANGE INFORMATION	SERIAL NO.
*1	DEC-39A → DEC-46AP	S/N 10623 ~
*2	CP-111+CP-113 → CP-161A	S/N 11398 ~
*3	TBC-7P → TBC-7E	S/N 11739 ~


UPPER DRUM
Y CH-A
Y CH-B
CHROMA CH-A
CHROMA CH-B
HEAD AMP
HEAD AMP
Y A
Y B
C A
C B
RF AMP
RF AMP
RF METER
SW-144
DEMODULATOR
MUTE
NON LINEAR DEEMPHASIS
DROPOUT DET
DEMODULATOR
NON-LINEAR DEEMPHASIS
MUTE
DROPOUT DET
VIDEO WITH VITC
TO SY-64AP
DEC-46AP
EDGE DET
*1
TBC-7E(1/2)
*3
A→D CONV
IMPACT ERROR CORRECTOR
(1/2)
SY-64AP
A→D CONV
*3 (2/2)
TBC-7E
TBC-8P
DNR
S→P CONV
32 LINE MEMORY
P→S CONV
DOC
D→A CONV
S→P CONV
32 LINE MEMORY
P→S CONV
R-Y/B-Y EXPANDER
DOC
DOC
D→A CONV
D→A CONV
8
64
REF SIGNAL GENERATOR
TBC-9P
EN-48P
Y/C MIX
CHARACTER SIG FROM SY-61
CHARACTER INSERT
VIDEO OUT-1
VIDEO OUT-2
VIDEO OUT-3
TV VIDEO
TV MONITOR
MONITOR OUT
COMPONENT 2 Y OUT
VO-18AP(2/2)
CHROMA ENCODER
R-Y OUT
B-Y OUT
DUB R-Y
DUB B-Y
DUB R-Y/Y DO
DUB B-Y/C DO
Y DO
C DO
DUB/COMPONENT 1 OUT
DUB Y
DUB C
DUB REF VIDEO IN
REF VIDEO IN
VO-18AP (1/2)
AGC
DM-56P
REF VIDEO IN
REF VIDEO OUT (THROUGH OUT)
CP-101AP
AFM-1A
RF AMP
DEMODULATOR
DOC
NOISE REDUCTION
DEMODULATOR
DOC
NOISE REDUCTION
BF-28A(1/2) +VR-42
AUDIO CH-2
AUDIO CH-1
HEAD AMP
NOISE REDUCTION
HEAD AMP
NOISE REDUCTION
AU-118P
OUTPUT AMP
CH-4
OUTPUT AMP
CH-3
OUTPUT AMP
SELECTED CH-2/CH-4
OUTPUT AMP
SELECTED CH-1/CH-3
AUTO
MANU
MIX
OUTPUT AMP
CH-2
OUTPUT AMP
CH-1
*2
CP-161A
HEADPHONE AMP
HEADPHONE
HP-33+VR-62
VU DETECT, dB DETECT
4
FL METER DRIVER
34
FL AUDIO METER
BF-28A(2/2)
DP-74+DP-73
TBC-REMOTE
6
RM-57(1/2)
CP-103AP
TO TBC-8P TBC-9P VO-18AP EN-48P

OVERALL(1/2)

BVW-60P


DRUM
PG
PG(A)
PG(B)
SPEED DET
DRIVE
DRUM
M
P-PG
PB V
PHASE DET
D→A CONVERTER
REF V
1/2 VD GEN
AFC DET
SV-82A
CAPSTAN
FG
FG(A)
FG(B)
SPEED DET
TRACON VR
A→D CONVERTER
NORMAL DET
INSTANT START DET
D→A CONVERTER
DRIVE
CAPSTAN
M
RE-28 +DR-56
CTL
REC SPEED DET
4FG F/R GEN
4FG
F/R
SEARCH SPEED DET
D→A CONVERTER
STOP BRAKE DET
SV-82A
CAPSTAN CURRENT
SV-84P
T-REEL
FG
T-REEL 4FG F/R GEN
T-REEL INERTIA/ DIAMETER MEASURE
D→A CONVERTER
INERTIA COMPENSATE
DRIVE
T-REEL
M
S-REEL
FG
S-REEL 4FG F/R GEN
S-REEL INERTIA/ DIAMETER MEASURE
D→A CONVERTER
INERTIA COMPENSATE
DRIVE
S-REEL
M
DE-15
DME
TENSION DET
A→D CONVERTER
SV-82A
SV-83B
RM-40 +RE-36 +DR-56
TR-18
TIME CODE OUT
OUTPUT AMP
HEAD AMP
TIME CODE
TC-40AP
SEARCH DIAL (PTC-32)
8
TIME COUNTER DISPLAY (DP-71A)
15
KEYBOARD CONTROLLER
21
KEY MATRIX (KY-107A) (DP-71A)
KY-96C
LTC READER
4
DM-56
VIDEO with VITC
VITC READER
4
8
CPU-1
8
CPU-2
8
SERIAL I/F
2
2
REMOTE-1
IN
OUT
SW etc
CONT SIGNAL etc
I/O EXPANDER
8
8
CHARACTER GENERATOR
8
PARALLEL I/F
32
REMOTE-2
SY-64AP(2/2)
SY-61A
RM-57(2/2)
VO-18
CHARACTER SIG
DM-56
REF ENV
A→D CONV
WOBBLING GEN
AUTO OFFSET
D→A CONV
BIMORPH DRIVE
BIMORPH
FG(A)
FG(B)
2FG GEN
SPEED DET
HYSTERESIS CANCEL
STRAIN GAGE
DT-13, DT-14P
DT-15

Note on Block Diagram

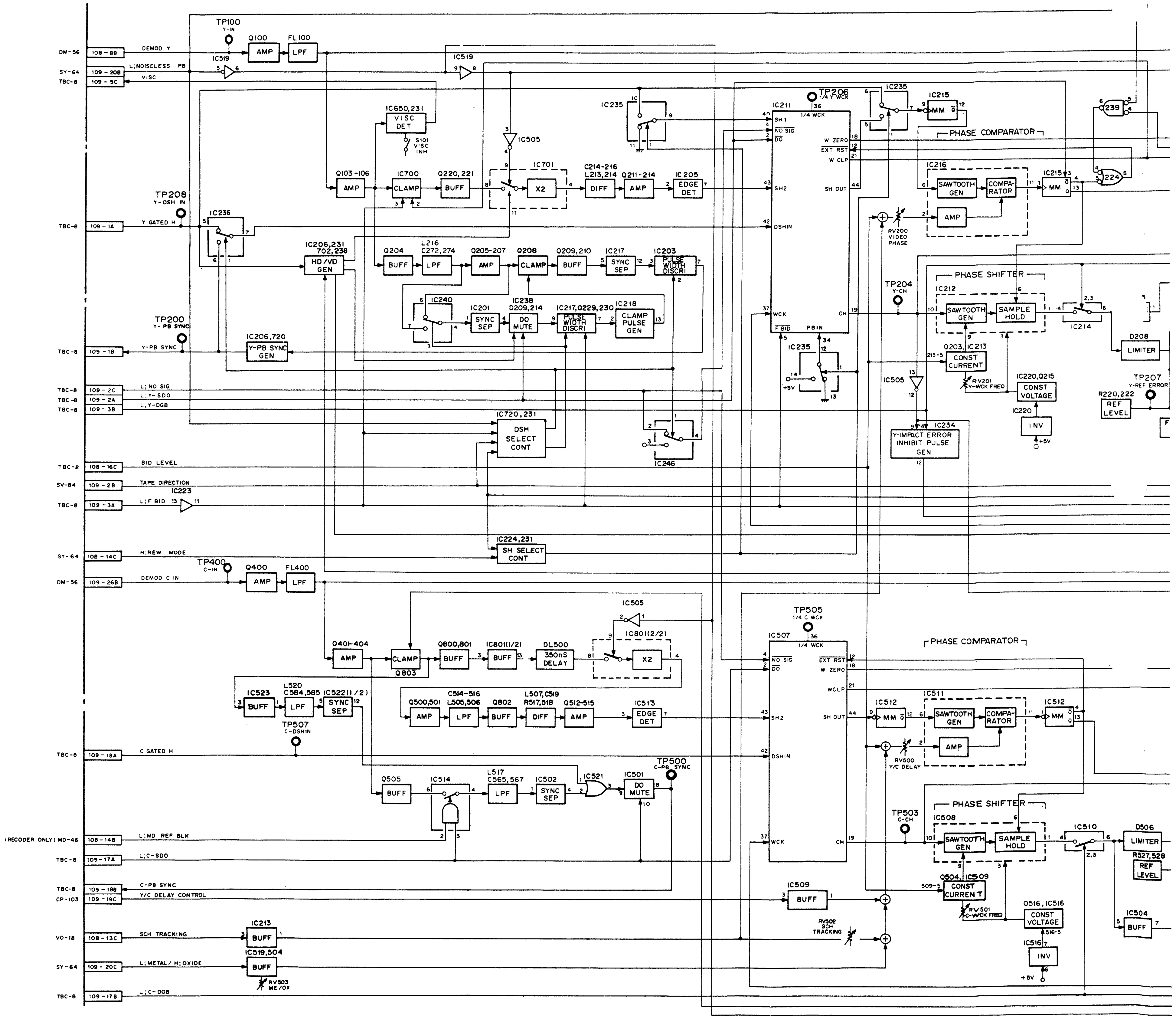
See the overall block diagram for the connector destination's board name in each board's block diagram.

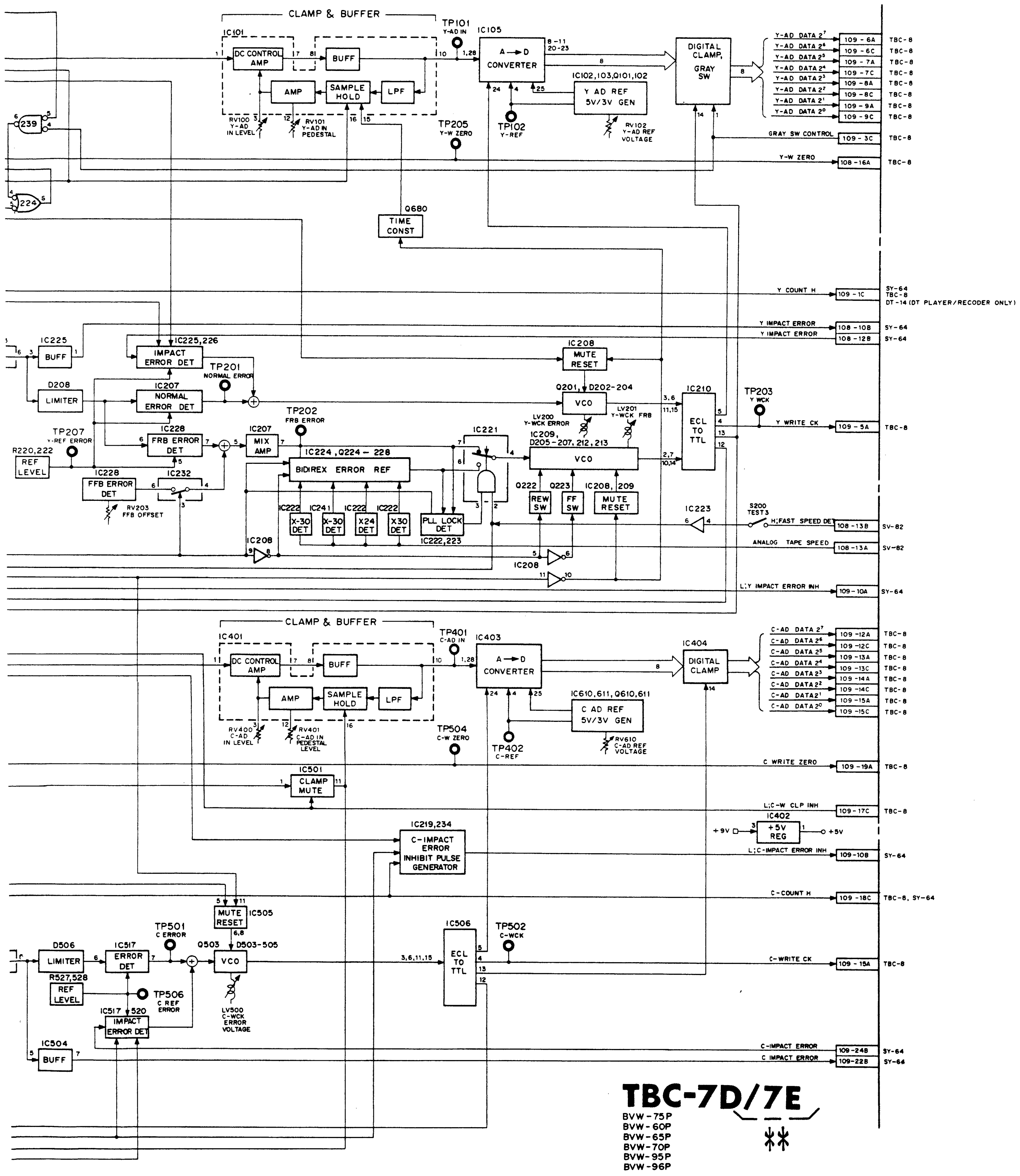
OVERALL (2/2)

BVW-60P

A/D CONVERTER WRITE CLOCK GENERATOR

S/N 10713 and higher


DM-56 108-8B DEMOD Y
SY-64 109-20B L;NOISELESS PB
TBC-8 109-5C VISC
TBC-8 109-1A Y GATED H
TBC-8 109-1B Y-PB SYNC
TBC-8 109-2C L;NO SIG
TBC-8 109-2A L;Y-SDO
TBC-8 109-3B L;Y-DGB
TBC-8 108-16C BID LEVEL
SV-84 109-2B TAPE DIRECTION
TBC-8 109-3A L;F BID
SY-64 108-14C H;REW MODE
DM-56 109-26B DEMOD C IN
TBC-8 109-18A C GATED H
(RECODER ONLY) MD-46 108-14B L;MD REF BLK
TBC-8 109-17A L;C-SDO
TBC-8 109-18B C-PB SYNC
CP-103 109-19C Y/C DELAY CONTROL
VO-18 108-13C SCH TRACKING
SY-64 109-20C L;METAL/H;OXIDE
TBC-8 109-17B L;C-DGB
TP100 Y-IN
Q100 AMP
FL100 LPF
IC519
IC650,231 VISC DET
S101 VISC INH
IC505
IC701 X2
Q103-106 AMP
IC700 CLAMP
Q220,221 BUFF
C214-216 L213,214 DIFF
Q211-214 AMP
IC205 EDGE DET
IC235
TP208 Y-DSH IN
IC236
IC206,231 702,238 HD/VD GEN
Q204 BUFF
L216 C272,274 LPF
Q205-207 AMP
Q208 CLAMP
Q209,210 BUFF
IC217 SYNC SEP
IC203 PULSE WIDTH DISCRI
IC240
IC201 SYNC SEP
IC238 Q209,214 DO MUTE
IC217,Q229,230 PULSE WIDTH DISCRI
IC218 CLAMP PULSE GEN
TP200 Y-PB SYNC
IC206,720 Y-PB SYNC GEN
IC720,231 DSH SELECT CONT
IC246
IC223
IC224,231 SH SELECT CONT
TP206 1/4 Y WCK
IC211
SH1 NO SIG DO W ZERO EXT RST W CLP SH2 SH OUT DSHIN WCK F BID PBIN CH
IC215 MM
PHASE COMPARATOR
IC216 SAWTOOTH GEN COMPA-RATOR AMP
RV200 VIDEO PHASE
IC239
IC224
TP204 Y-CH
PHASE SHIFTER
IC212 SAWTOOTH GEN SAMPLE HOLD
IC214
D208 LIMITER
Q203,IC213 CONST CURRENT
RV201 Y-WCK FREQ
IC220,Q215 CONST VOLTAGE
IC220 INV
+5V
TP207 Y-REF ERROR
R220,222 REF LEVEL
IC234 Y-IMPACT ERROR INHIBIT PULSE GEN
TP400 C-IN
Q400 AMP
FL400 LPF
Q401-404 AMP
CLAMP Q803
Q800,801 BUFF
IC801(1/2) BUFF
DL500 350nS DELAY
IC801(2/2) X2
IC523 BUFF
L520 C584,585 LPF
IC522(1/2) SYNC SEP
TP507 C-DSHIN
Q500,501 AMP
C514-516 L505,506 LPF
Q802 BUFF
L507,C519 R517,518 DIFF
Q512-515 AMP
IC513 EDGE DET
Q505 BUFF
IC514
L517 C565,567 LPF
IC502 SYNC SEP
IC521
IC501 DO MUTE
TP500 C-PB SYNC
TP505 1/4 C WCK
IC507
IC512 MM
IC511 SAWTOOTH GEN COMPA-RATOR AMP
RV500 Y/C DELAY
TP503 C-CH
IC508 SAWTOOTH GEN SAMPLE HOLD
IC510
D506 LIMITER
R527,528 REF LEVEL
Q504,IC509 CONST CURRENT
RV501 C-WCK FREQ
Q516,IC516 CONST VOLTAGE
IC516 INV
IC509 BUFF
RV502 SCH TRACKING
IC504 BUFF
IC213 BUFF
IC519,504 BUFF
RV503 ME/OX


CLAMP & BUFFER
IC101
DC CONTROL AMP
BUFF
AMP
SAMPLE HOLD
LPF
RV100 Y-AD IN LEVEL
RV101 Y-AD IN PEDESTAL
IC239
IC224
TP101 Y-AD IN
IC105
A → D CONVERTER
TP102 Y-REF
TP205 Y-W ZERO
IC102,103,Q101,102
Y AD REF 5V/3V GEN
RV102 Y-AD REF VOLTAGE
DIGITAL CLAMP, GRAY SW
Q680
TIME CONST
Y-AD DATA 2^7
Y-AD DATA 2^6
Y-AD DATA 2^5
Y-AD DATA 2^4
Y-AD DATA 2^3
Y-AD DATA 2^2
Y-AD DATA 2^1
Y-AD DATA 2^0
109 - 6A
109 - 6C
109 - 7A
109 - 7C
109 - 8A
109 - 8C
109 - 9A
109 - 9C
TBC-8
GRAY SW CONTROL
109 - 3C
Y-W ZERO
108 - 16A
Y COUNT H
109 - 1C
SY-64
TBC-8
DT-14 (DT PLAYER/RECODER ONLY)
Y IMPACT ERROR
108 - 10B
Y IMPACT ERROR
108 - 12B
IC225
BUFF
IC225,226
IMPACT ERROR DET
D208
LIMITER
IC207
NORMAL ERROR DET
TP201 NORMAL ERROR
TP207 Y-REF ERROR
R220,222
REF LEVEL
IC228
FRB ERROR DET
IC207
MIX AMP
TP202 FRB ERROR
IC228
FFB ERROR DET
IC232
RV203 FFB OFFSET
IC224,Q224 - 228
BIDIREX ERROR REF
IC222 X-30 DET
IC241 X-30 DET
IC222 X24 DET
IC222 X30 DET
PLL LOCK DET
IC222,223
IC221
IC208
MUTE RESET
Q201, D202-204
VCO
LV200 Y-WCK ERROR
LV201 Y-WCK FRB
IC209, D205-207, 212, 213
VCO
Q222 REW SW
Q223 FF SW
IC208, 209 MUTE RESET
IC210
ECL TO TTL
TP203 Y WCK
Y WRITE CK
109 - 5A
IC223
S200 TEST3
H; FAST SPEED DET
108 - 13B
SV-82
ANALOG TAPE SPEED
108 - 13A
IC208
L;Y IMPACT ERROR INH
109 - 10A
CLAMP & BUFFER
IC401
DC CONTROL AMP
BUFF
AMP
SAMPLE HOLD
LPF
RV400 C-AD IN LEVEL
RV401 C-AD IN PEDESTAL LEVEL
TP401 C-AD IN
IC403
A → D CONVERTER
TP402 C-REF
TP504 C-W ZERO
IC610,611,Q610,611
C AD REF 5V/3V GEN
RV610 C-AD REF VOLTAGE
IC404
DIGITAL CLAMP
C-AD DATA 2^7
C-AD DATA 2^6
C-AD DATA 2^5
C-AD DATA 2^4
C-AD DATA 2^3
C-AD DATA 2^2
C-AD DATA 2^1
C-AD DATA 2^0
109 - 12A
109 - 12C
109 - 13A
109 - 13C
109 - 14A
109 - 14C
109 - 15A
109 - 15C
C WRITE ZERO
109 - 19A
IC501
CLAMP MUTE
L;C-W CLP INH
109 - 17C
IC402
+9V
+5V REG
+5V
IC219,234
C-IMPACT ERROR INHIBIT PULSE GENERATOR
L;C-IMPACT ERROR INH
109 - 10B
C-COUNT H
109 - 18C
TBC-8, SY-64
MUTE RESET IC505
D506
LIMITER
IC517
ERROR DET
TP501 C ERROR
Q503 D503-505
VCO
LV500 C-WCK ERROR VOLTAGE
R527,528
REF LEVEL
TP506 C REF ERROR
IC517, 520
IMPACT ERROR DET
IC504
BUFF
IC506
ECL TO TTL
TP502 C-WCK
C-WRITE CK
109 - 15A
C-IMPACT ERROR
109 - 24B
C IMPACT ERROR
109 - 22B
SY-64
**

TBC-7D/7E

BVW-75P
BVW-60P
BVW-65P
BVW-70P
BVW-95P
BVW-96P

SECTION 16
SCHEMATIC DIAGRAM

CIRCUIT CONFIGURATION

The circuit information is provided below.

System	Board	Circuit function
VIDEO	DM-56P	Y/C Demodulator
	DUS-259	Metal/Oxide LPF Switch
	DUS-269	C RF Phase EQ.
	DUS-288 *4	DO RF EQ.
	EQ-26 *4	RF EQ.
	EQ-28 *4	RF EQ.
	** TBC-7E	Time Base Corrector
	SW-261 *3	Metal/Oxide Y/C Delay Adjust Volume
	TBC-8P *7	Time Base Corrector
	NR-25 *7	Y Digital Noise Reduction
	TBC-12P *8	Time Base Corrector
	NR-32 *8	Y Digital Noise Reduction, Read Clock Generator
	TBC-9P	Time Base Corrector
	EN-48P	C Encoder
	VO-18AP	Video Output
	DUS-270	Squelch Buffer
	DEC-39A*5	Edge Detector
	DEC-46AP *6	Edge Detector
	CP-103AP	Sub Control Panel
	CP-101AP	REF. Video Input
AUDIO	AU-118P	LNG Audio Head Amplifier
	AFM-1A	AFM Audio Demodulator
	FL-61	Low-pass Filter
	BF-28A	Audio Buffer/Level Detector
	VR-42	Audio PB Volume

System	Board	Circuit function
AUDIO	CP-111 CP-161A	Audio Output Amplifier/Driver
	CP-113	Audio Balanced Amplifier
	HP-33	Headphones Amplifier/Jack
	VR-62	Headphones Level Volume
	DP-74	Audio Level Meter
	DP-73	DC-AC/DC Converter
	SW-144A	Select Switch/Display
	DP-72	RF Meter LED
	VR-61	Tracking Control Volume
SERVO	SV-82A	Capstan/Drum Servo
	SV-83B	Reel Servo
	SV-84P	Capstan/Drum Servo
	RE-28	Capstan/Drum Motor Driver
	PTC-20	Cassette Detector (Tape Thickness, Reel Hub Diameter, Metal/Oxide)
	PTC-36	Cassette Detector (Tape Thickness, Reel Hub Diameter, Metal/Oxide)
	PTC-21	Reel Table Position Detector
	DR-56	Capstan/Reel Motor Driver & Drum Error Amplifier
	RE-36	Reel Motor Driver
	RM-40	Reel Motor
	DE-15	Reel Motor FG
	SE-57	Threading Motor Control
	PTC-31	Threading Motor FG
	TR-18	Tape Tension Sensor

System	Board	Circuit function
SYSTEM CONTROL	SY-61A	System Control
**	DUS-570	Fan Motor Error Detector
	SY-64AP	Time Code Reader
	KY-96C	Keyboard
	KY-107A	Keyboard
	DP-71A	Time Counter Display
	PTC-32	Search Dial
	PT-9	Power Transistor
	PD-35	Pinch/Cleaning Solenoid
	PTC-15	Thread/Unthread End Sensor
	RM-57	Remote Connector
	TC-40AP	LTC PB Amplifier
	CL-14	Cassette-up Compartment
	CL-24 *9	Cassette-up Compartment LED
	PC-32 *1	Large/Small Cassette Detector
	PC-47 *2	Large/Small Cassette Detector
	PC-33	Cassette DOWN Detector
	PC-41	Cassette IN Detector
	CCM-2	UP/DOWN Motor
	HC-11	Hours Meter
OTHERS	AC-81 *1	Relay Board of AC Inlet
	AC-96 *2	Relay Board of AC Inlet
	M1	Switching Regulator
	M2	Switching Regulator
	C1	Switching Regulator
	C2	Switching Regulator
	MB-191C	Mother Board
	MB-192	Mother Board
	EX-116	Extension Board
	EX-134	Extension Board
	EX-151	Extension Board

*1...Serial No.: up to 10170
*2...Serial No.: 10171 and higher
*3...Serial No.: up to 10270
*4...Serial No.: 10271 and higher
*5...Serial No.: up to 10622
*6...Serial No.: 10623 and higher
*7...Serial No.: up to 10712
*8...Serial No.: 10713 and higher
*9...Serial No.: 11083 and higher

NOTE

In the schematic diagrams, the following marks are described nearby reference number. These are parts data at factory.

CAPACITOR (C)

AL, AS — ELECTROLYTIC
TA — TANTALUM
CA, CC, CCS, CM, CS — CERAMIC
MPS, PP, PS, PT — MAYLAR
MD — DIPPED MICA
MS — MICA

RESISTOR (R)
VARIABLE RESISTOR (RV)

RC, RD — CARBON
RF — FUSE
RN, RS — METAL
RW — WIREWOUND

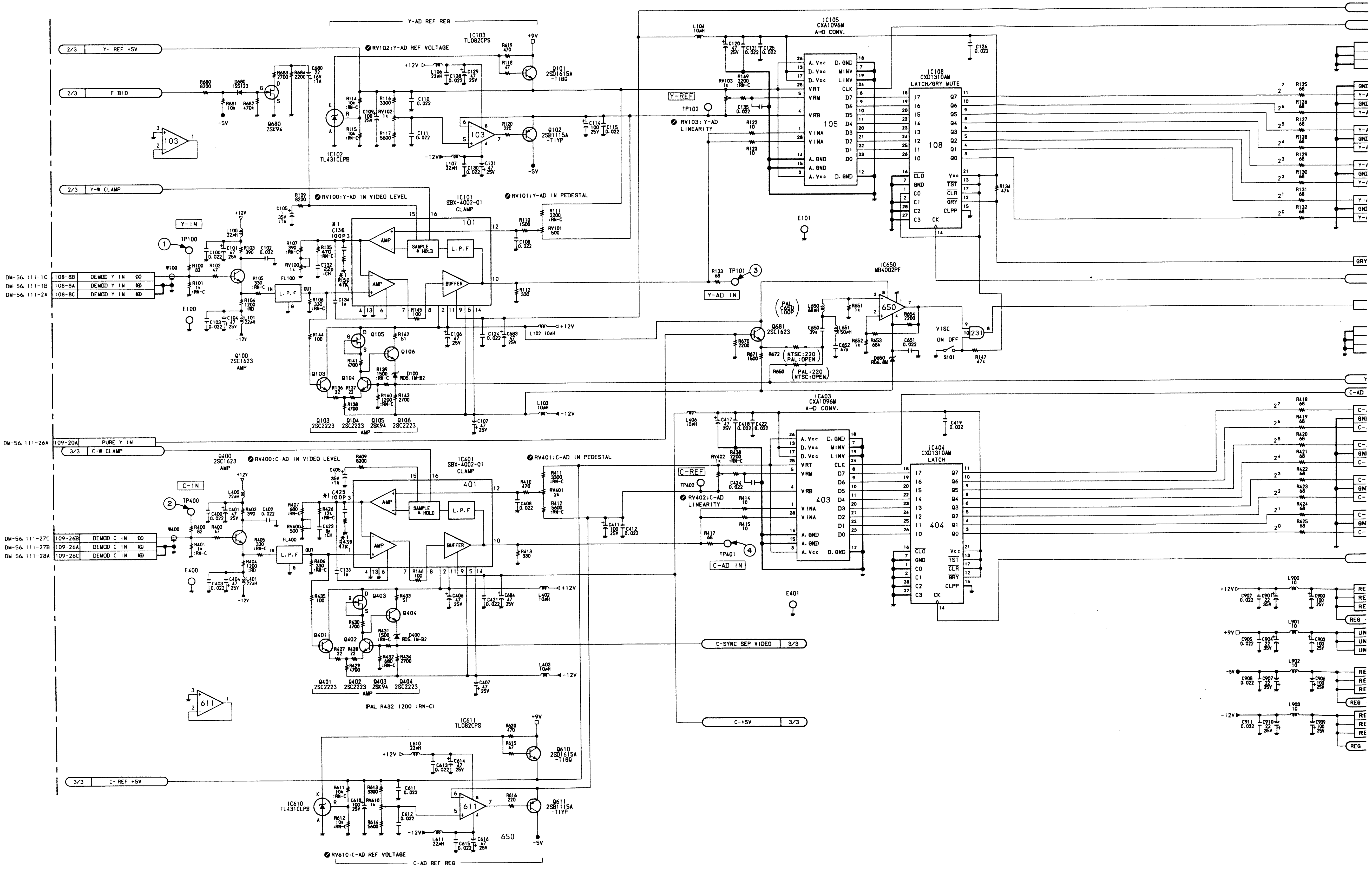
TBC-7D (1/3) ; A/D CONVERTER

**

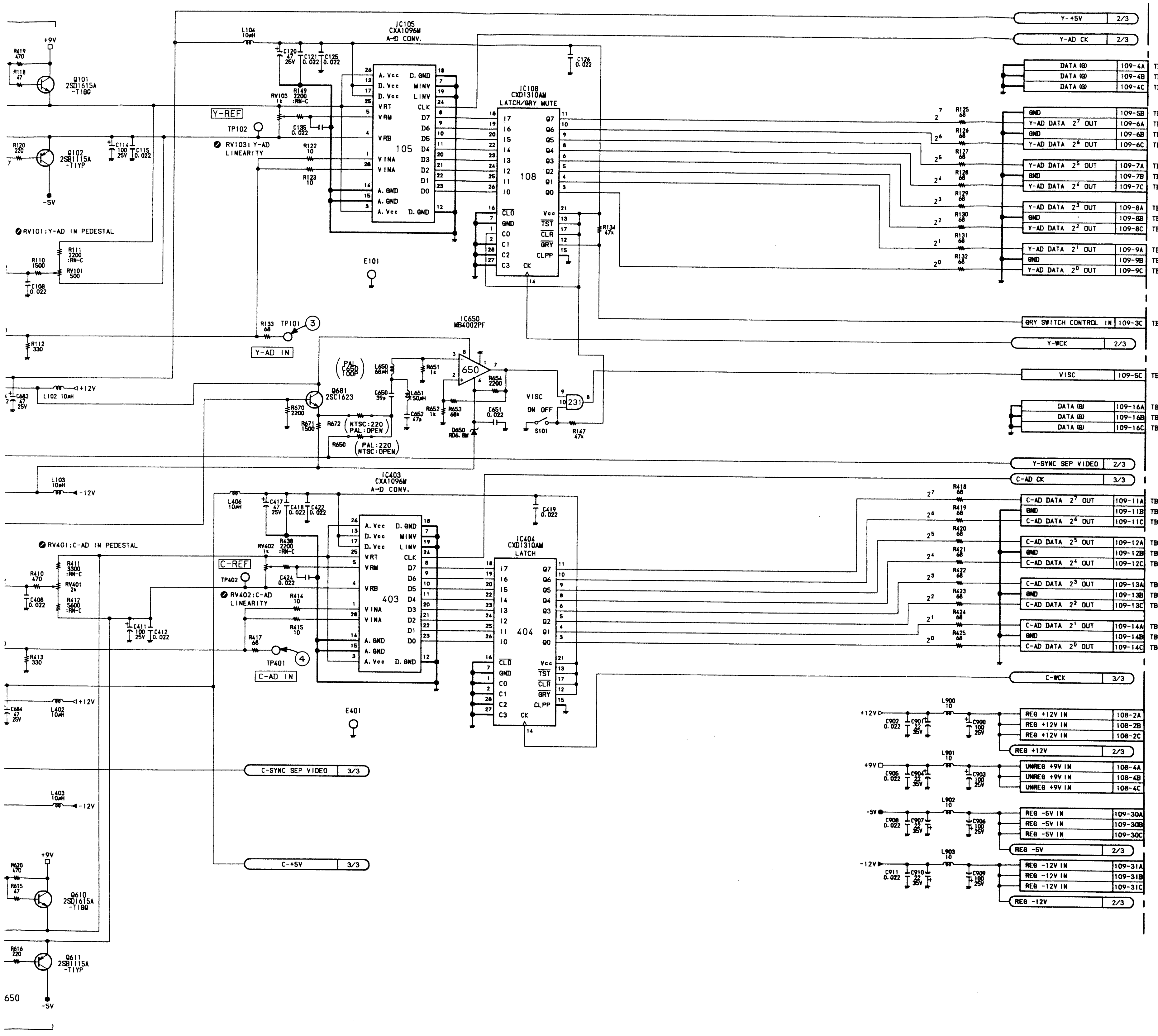
S/N 10713 through 11738

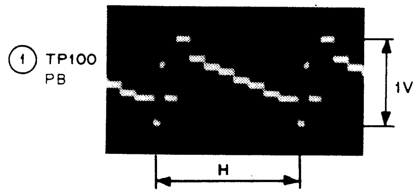
NOTE

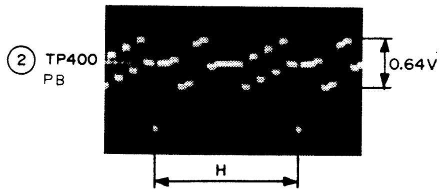
MARK	CHANGE INFORMATION	SERIAL NO.
*1	ADDED C136, C425, R150, R439	S/N 11083 ~

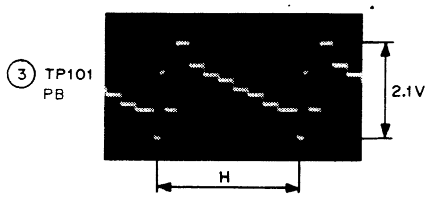

Y-AD REF REG
IC103 TL082CPS
RV102:Y-AD REF VOLTAGE
Q101 2SD1615A -T1BQ
Q102 2SB1115A -T1YP
IC102 TL431CLPB
Q680 2SK94
D680 1SS123
Y- REF +5V
F BID
Y-W CLAMP
Y-IN
TP100
DM-56 111-1C
DM-56 111-1B
DM-56 111-2A
108-8B DEMOD Y IN
108-8A DEMOD Y IN
108-8C DEMOD Y IN
E100
Q100 2SC1623 AMP
FL100 L.P.F
RV100:Y-AD IN VIDEO LEVEL
IC101 SBX-4002-01 CLAMP
AMP
SAMPLE & HOLD
L.P.F
BUFFER
RV101:Y-AD IN PEDESTAL
Q103 2SC2223
Q104 2SC2223
Q105 2SK94
Q106 2SC2223
AMP
D100 RD5.1M-B2
DM-56 111-26A
109-20A PURE Y IN
C-W CLAMP
IC105 CXA1096M A-D CONV.
Y-REF
TP102
RV103:Y-AD LINEARITY
IC108 CXD1310AM LATCH/GRY MUTE
E101
TP101
Y-AD IN
IC650 MB4002PF
Q681 2SC1623
NTSC:220 PAL:OPEN
PAL:220 NTSC:OPEN
D650 RD6.8M
VISC ON OFF
S101
C-IN
TP400
Q400 2SC1623 AMP
RV400:C-AD IN VIDEO LEVEL
IC401 SBX-4002-01 CLAMP
RV401:C-AD IN PEDESTAL
DM-56 111-27C
DM-56 111-27B
DM-56 111-28A
109-26B DEMOD C IN
109-26A DEMOD C IN
109-26C DEMOD C IN
E400
FL400 L.P.F
Q401 2SC2223
Q402 2SC2223
Q403 2SK94
Q404 2SC2223
D400 RD5.1M-B2
(PAL R432 1200 :RN-C)
IC403 CXA1096M A-D CONV.
C-REF
TP402
RV402:C-AD LINEARITY
TP401
C-AD IN
E401
IC404 CXD1310AM LATCH
C-SYNC SEP VIDEO
C-+5V
IC611 TL082CPS
Q610 2SD1615A -T1BQ
Q611 2SB1115A -T1YP
IC610 TL431CLPB
RV610:C-AD REF VOLTAGE
C-AD REF REG
C- REF +5V
+12V
+9V
-5V
-12V
GRY
C-AD
1
2
3
4
5
A
B
C
D
E
F
G
H

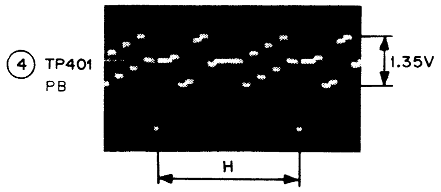
SERIAL NO.
S/N 11083 ~


IC105
CXA1096M
A-D CONV.
IC108
CXD1310AM
LATCH/GRY MUTE
IC403
CXA1096M
A-D CONV.
IC404
CXD1310AM
LATCH
IC650
MB4002PF
Q101
2SD1615A
-T1BQ
Q102
2SB1115A
-T1YP
Q681
2SC1623
Q610
2SD1615A
-T1BQ
Q611
2SB1115A
-T1YP
Y-REF
C-REF
RV103: Y-AD LINEARITY
RV101: Y-AD IN PEDESTAL
RV401: C-AD IN PEDESTAL
RV402: C-AD LINEARITY
TP101
TP102
TP401
TP402
Y-AD IN
C-AD IN
E101
E401
VISC
ON OFF
S101
(NTSC: 220 PAL: OPEN)
(PAL: 220 NTSC: OPEN)
Y-+5V 2/3
Y-AD CK 2/3
DATA (0) 109-4A TBC-12,107-4A
DATA (0) 109-4B TBC-12,107-4B
DATA (0) 109-4C TBC-12,107-4C
GND 109-5B TBC-12,107-5B
Y-AD DATA 2⁷ OUT 109-6A TBC-12,107-6A
GND 109-6B TBC-12,107-6B
Y-AD DATA 2⁶ OUT 109-6C TBC-12,107-6C
Y-AD DATA 2⁵ OUT 109-7A TBC-12,107-7A
GND 109-7B TBC-12,107-7B
Y-AD DATA 2⁴ OUT 109-7C TBC-12,107-7C
Y-AD DATA 2³ OUT 109-8A TBC-12,107-8A
GND 109-8B TBC-12,107-8B
Y-AD DATA 2² OUT 109-8C TBC-12,107-8C
Y-AD DATA 2¹ OUT 109-9A TBC-12,107-9A
GND 109-9B TBC-12,107-9B
Y-AD DATA 2⁰ OUT 109-9C TBC-12,107-9C
GRY SWITCH CONTROL IN 109-3C TBC-12,107-3C
Y-WCK 2/3
VISC 109-5C TBC-12,107-5C
DATA (0) 109-16A TBC-12,107-16A
DATA (0) 109-16B TBC-12,107-16B
DATA (0) 109-16C TBC-12,107-16C
Y-SYNC SEP VIDEO 2/3
C-AD CK 3/3
C-AD DATA 2⁷ OUT 109-11A TBC-12,107-11A
GND 109-11B TBC-12,107-11B
C-AD DATA 2⁶ OUT 109-11C TBC-12,107-11C
C-AD DATA 2⁵ OUT 109-12A TBC-12,107-12A
GND 109-12B TBC-12,107-12B
C-AD DATA 2⁴ OUT 109-12C TBC-12,107-12C
C-AD DATA 2³ OUT 109-13A TBC-12,107-13A
GND 109-13B TBC-12,107-13B
C-AD DATA 2² OUT 109-13C TBC-12,107-13C
C-AD DATA 2¹ OUT 109-14A TBC-12,107-14A
GND 109-14B TBC-12,107-14B
C-AD DATA 2⁰ OUT 109-14C TBC-12,107-14C
C-WCK 3/3
REG +12V IN 108-2A
REG +12V IN 108-2B
REG +12V IN 108-2C
REG +12V 2/3
UNREG +9V IN 108-4A
UNREG +9V IN 108-4B
UNREG +9V IN 108-4C
REG -5V IN 109-30A
REG -5V IN 109-30B
REG -5V IN 109-30C
REG -5V 2/3
REG -12V IN 109-31A
REG -12V IN 109-31B
REG -12V IN 109-31C
REG -12V 2/3
C-SYNC SEP VIDEO 3/3
C-+5V 3/3
+12V
+9V
-5V
-12V
650







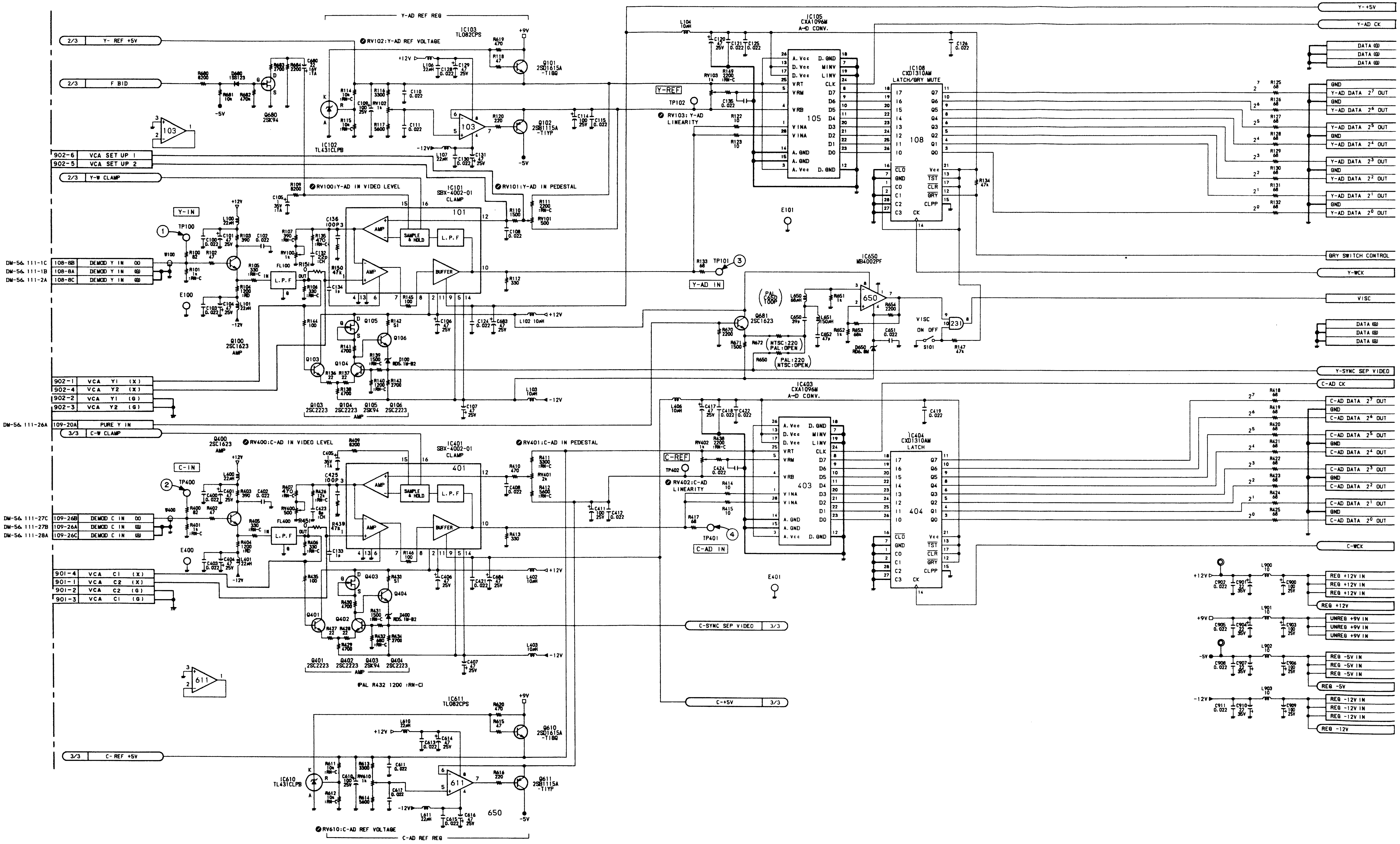


TBC-7D(1/3)

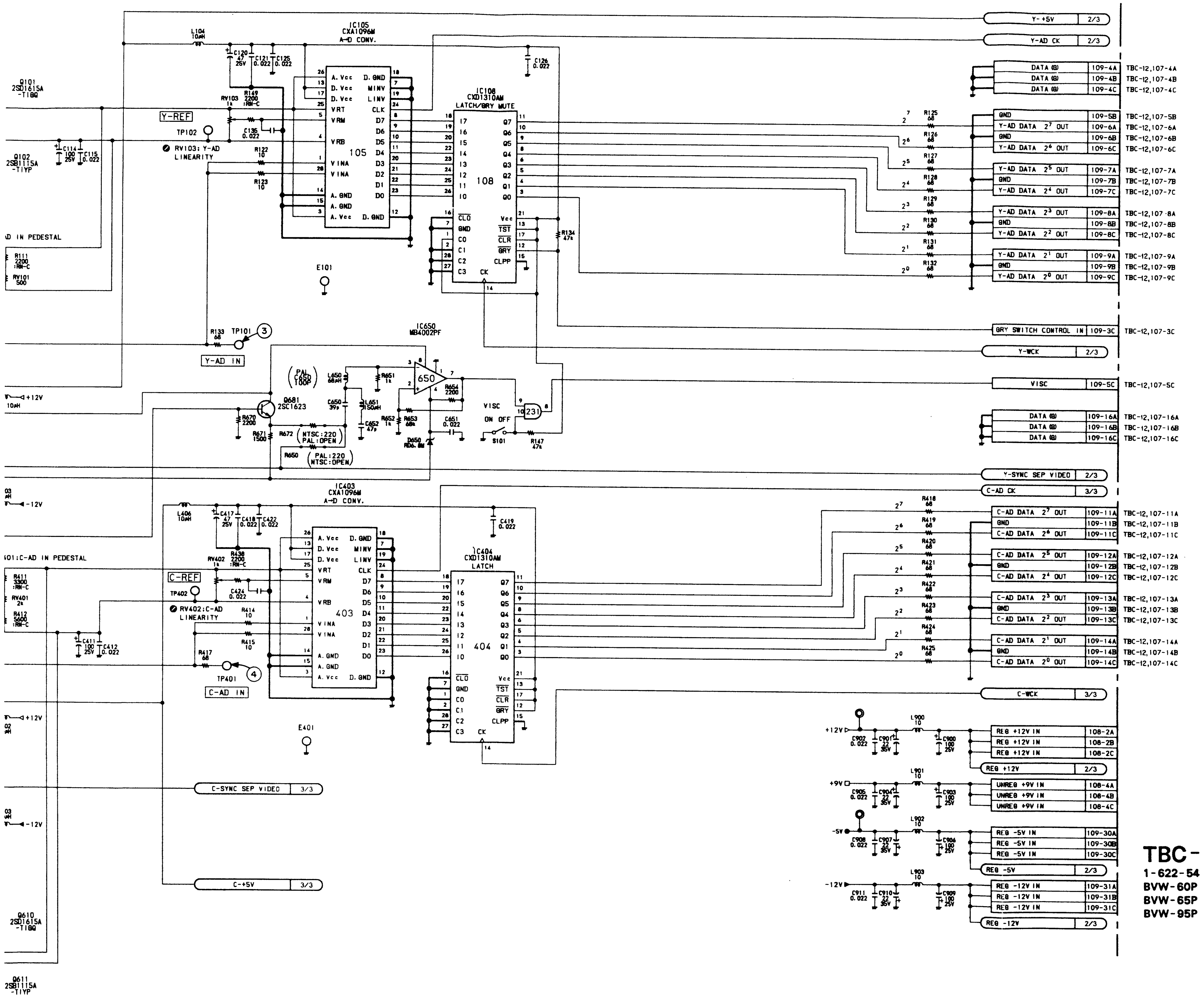
1-622-548-14, 15
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

** TBC－7E (1/3); A/D CONVERTER

S/N 11739 and higher


1
2
3
4
5
Y-AD REF REG
IC103 TL082CPS
RV102:Y-AD REF VOLTAGE
2/3 Y- REF +5V
2/3 F BID
IC102 TL431CLPB
Q101 2SD1615A -T1BQ
Q102 2SB1115A -T1YP
Q680 2SK94
902-6 VCA SET UP 1
902-5 VCA SET UP 2
2/3 Y-W CLAMP
RV100:Y-AD IN VIDEO LEVEL
IC101 SBX-4002-01 CLAMP
RV101:Y-AD IN PEDESTAL
Y-IN
TP100
DM-56 111-1C 108-8B DEMOD Y IN 00
DM-56 111-1B 108-8A DEMOD Y IN (G)
DM-56 111-2A 108-8C DEMOD Y IN (B)
AMP
SAMPLE & HOLD
L.P.F
BUFFER
Q100 2SC1623 AMP
Q103 2SC2223
Q104 2SC2223
Q105 2SK94
Q106 2SC2223
902-1 VCA Y1 (X)
902-4 VCA Y2 (X)
902-2 VCA Y1 (G)
902-3 VCA Y2 (G)
DM-56 111-26A 109-20A PURE Y IN
3/3 C-W CLAMP
IC105 CXA1096M A-D CONV.
Y-REF
TP102
RV103: Y-AD LINEARITY
IC108 CXD1310AM LATCH/GRY MUTE
Y-AD IN
TP101
E101
IC650 MB4002PF
Q681 2SC1623
VISC ON OFF S101
PAL:220 NTSC:OPEN
Y-+5V
Y-AD CK
DATA (G)
DATA (B)
GND
Y-AD DATA 2⁷ OUT
Y-AD DATA 2⁶ OUT
Y-AD DATA 2⁵ OUT
Y-AD DATA 2⁴ OUT
Y-AD DATA 2³ OUT
Y-AD DATA 2² OUT
Y-AD DATA 2¹ OUT
Y-AD DATA 2⁰ OUT
GRY SWITCH CONTROL
Y-WCK
VISC
Y-SYNC SEP VIDEO
C-AD CK
Q400 2SC1623 AMP
RV400:C-AD IN VIDEO LEVEL
IC401 SBX-4002-01 CLAMP
RV401:C-AD IN PEDESTAL
C-IN
TP400
DM-56 111-27C 109-26B DEMOD C IN 00
DM-56 111-27B 109-26A DEMOD C IN (G)
DM-56 111-28A 109-26C DEMOD C IN (B)
E400
901-4 VCA C1 (X)
901-1 VCA C2 (X)
901-2 VCA C2 (G)
901-3 VCA C1 (G)
Q401 2SC2223
Q402 2SC2223
Q403 2SK94
Q404 2SC2223
PAL R432 1200 :RN-C
IC403 CXA1096M A-D CONV.
C-REF
TP402
RV402:C-AD LINEARITY
C-AD IN
TP401
E401
IC404 CXD1310AM LATCH
C-AD DATA 2⁷ OUT
C-AD DATA 2⁶ OUT
C-AD DATA 2⁵ OUT
C-AD DATA 2⁴ OUT
C-AD DATA 2³ OUT
C-AD DATA 2² OUT
C-AD DATA 2¹ OUT
C-AD DATA 2⁰ OUT
C-WCK
C-SYNC SEP VIDEO 3/3
C-+5V 3/3
REG +12V IN
REG +12V
UNREG +9V IN
REG -5V IN
REG -5V
REG -12V IN
REG -12V
IC611 TL082CPS
IC610 TL431CLPB
Q610 2SD1615A -T1BQ
Q611 2SB1115A -T1YP
3/3 C- REF +5V
RV610:C-AD REF VOLTAGE
C-AD REF REG
650
+12V
+9V
-5V
-12V

A | B | C | D | E | F | G | H


Q101
2SD1615A
-T1BQ
Q102
2SB1115A
-T1YP
L104
10μH
C120
47
25V
C121
0.022
C125
0.022
IC105
CXA1096M
A-D CONV.
A. Vcc
D. Vcc
VRT
VRM
VRB
VINA
A. GND
D. GND
MINV
LINV
CLK
D7
D6
D5
D4
D3
D2
D1
D0
105
RV103
R149
2200
Y-REF
TP102
RV103: Y-AD LINEARITY
C135
0.022
R122
10
R123
10
C114
100
25V
C115
0.022
D IN PEDESTAL
R111
2200
RV101
500
E101
C126
0.022
IC108
CXD1310AM
LATCH/GRY MUTE
Q7
Q6
Q5
Q4
Q3
Q2
Q1
Q0
108
CLO
GND
C0
C1
C2
C3
CK
Vcc
TST
CLR
GRY
CLPP
R134
47k
R125
68
R126
68
R127
68
R128
68
R129
68
R130
68
R131
68
R132
68
Y- +5V
2/3
Y-AD CK
2/3
DATA (G)
109-4A
TBC-12,107-4A
109-4B
TBC-12,107-4B
109-4C
TBC-12,107-4C
GND
109-5B
TBC-12,107-5B
Y-AD DATA 2⁷ OUT
109-6A
TBC-12,107-6A
109-6B
TBC-12,107-6B
Y-AD DATA 2⁶ OUT
109-6C
TBC-12,107-6C
Y-AD DATA 2⁵ OUT
109-7A
TBC-12,107-7A
109-7B
TBC-12,107-7B
Y-AD DATA 2⁴ OUT
109-7C
TBC-12,107-7C
Y-AD DATA 2³ OUT
109-8A
TBC-12,107-8A
109-8B
TBC-12,107-8B
Y-AD DATA 2² OUT
109-8C
TBC-12,107-8C
Y-AD DATA 2¹ OUT
109-9A
TBC-12,107-9A
109-9B
TBC-12,107-9B
Y-AD DATA 2⁰ OUT
109-9C
TBC-12,107-9C
GRY SWITCH CONTROL IN
109-3C
TBC-12,107-3C
Y-WCK
2/3
VISC
109-5C
TBC-12,107-5C
109-16A
TBC-12,107-16A
109-16B
TBC-12,107-16B
109-16C
TBC-12,107-16C
Y-SYNC SEP VIDEO
2/3
C-AD CK
3/3
R133
68
TP101
③
Y-AD IN
IC650
MB4002PF
650
(PAL C650 100P)
L650
68μH
R651
1k
R654
2200
C650
39p
L651
150μH
C652
47p
R652
1k
R653
68k
C651
0.022
D650
RD6.8M
Q681
2SC1623
R670
2200
R671
1500
R672
(NTSC:220 PAL:OPEN)
R650
(PAL:220 NTSC:OPEN)
VISC
ON OFF
S101
R147
47k
231
+12V
10μH
-12V
L406
10μH
C417
47
25V
C418
0.022
C422
0.022
IC403
CXA1096M
A-D CONV.
403
401:C-AD IN PEDESTAL
R411
3300
RV401
2k
R412
5600
RV402
1k
R438
2200
C-REF
TP402
RV402: C-AD LINEARITY
C424
0.022
R414
10
R415
10
C411
100
25V
C412
0.022
R417
68
TP401
④
C-AD IN
E401
IC404
CXD1310AM
LATCH
404
R418
68
R419
68
R420
68
R421
68
R422
68
R423
68
R424
68
R425
68
C-AD DATA 2⁷ OUT
109-11A
TBC-12,107-11A
109-11B
TBC-12,107-11B
C-AD DATA 2⁶ OUT
109-11C
TBC-12,107-11C
C-AD DATA 2⁵ OUT
109-12A
TBC-12,107-12A
109-12B
TBC-12,107-12B
C-AD DATA 2⁴ OUT
109-12C
TBC-12,107-12C
C-AD DATA 2³ OUT
109-13A
TBC-12,107-13A
109-13B
TBC-12,107-13B
C-AD DATA 2² OUT
109-13C
TBC-12,107-13C
C-AD DATA 2¹ OUT
109-14A
TBC-12,107-14A
109-14B
TBC-12,107-14B
C-AD DATA 2⁰ OUT
109-14C
TBC-12,107-14C
C-WCK
3/3
+12V
L900
10
C902
0.022
C901
22
35V
C900
100
25V
REG +12V IN
108-2A
108-2B
108-2C
REG +12V
2/3
+9V
L901
10
C905
0.022
C904
22
35V
C903
100
25V
UNREG +9V IN
108-4A
108-4B
108-4C
-5V
L902
10
C908
0.022
C907
22
35V
C906
100
25V
REG -5V IN
109-30A
109-30B
109-30C
REG -5V
2/3
-12V
L903
10
C911
0.022
C910
22
35V
C909
100
25V
REG -12V IN
109-31A
109-31B
109-31C
REG -12V
2/3
C-SYNC SEP VIDEO
3/3
C-+5V
3/3
Q610
2SD1615A
-T1BQ
Q611
2SB1115A
-T1YP

TBC-7E(1/3)

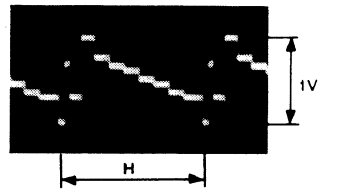
1-622-548-21

BVW-60P BVW-70P

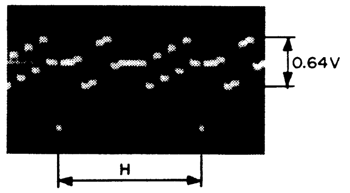
BVW-65P BVW-75P

BVW-95P BVW-96P

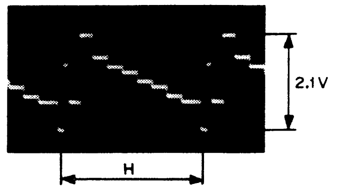
① TP100
PB



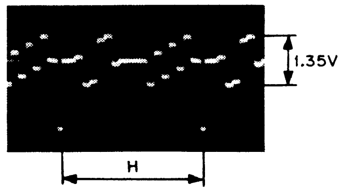
② TP400
PB



③ TP101
PB



④ TP401
PB



TBC−7D (2/3) ; Y WRITE CLOCK GENERATOR

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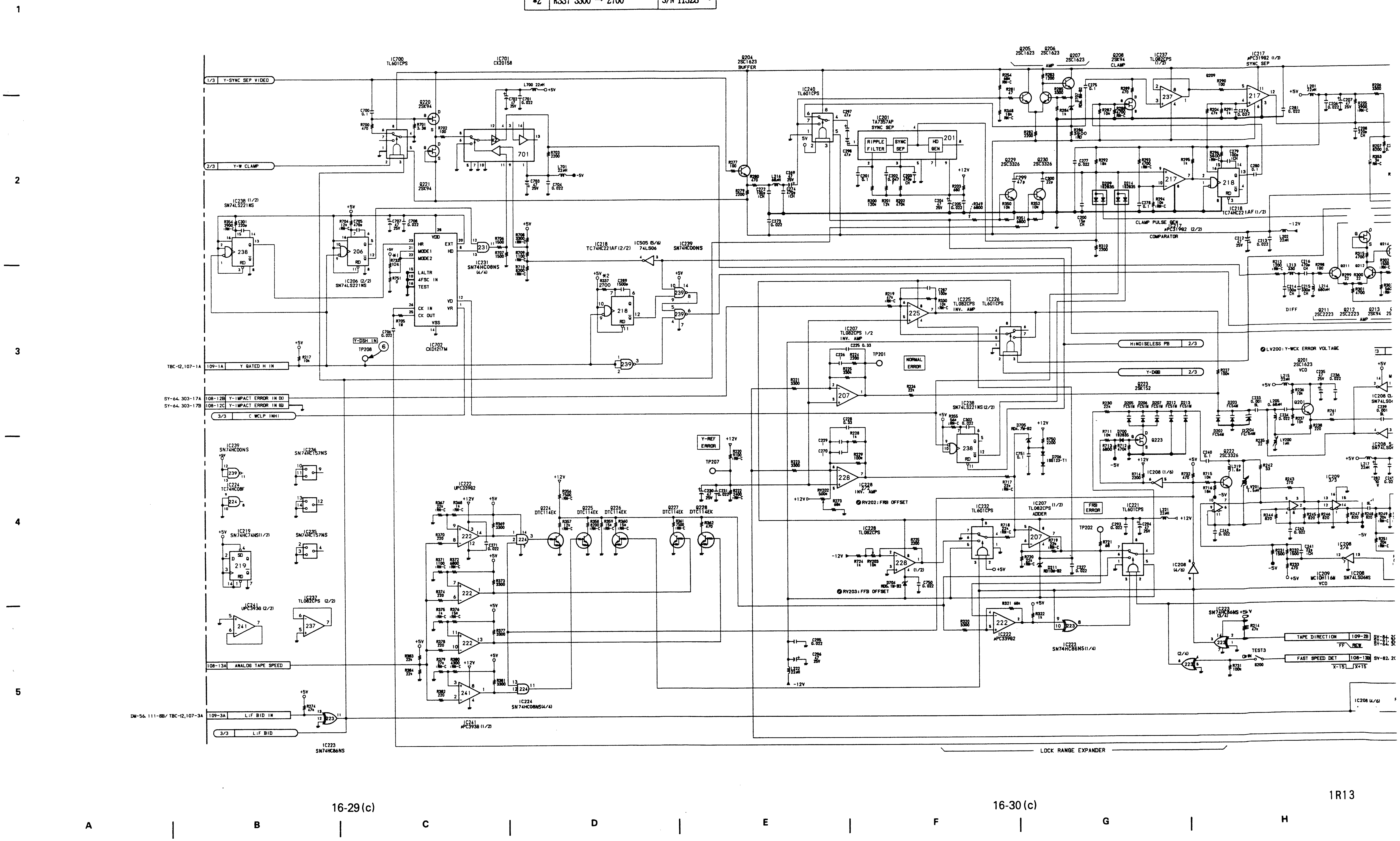
S/N 10713 through 11738

NOTE

MARK	CHANGE INFORMATION	SERIAL NO.
＊1	R733 47k → 10k	S/N 11083 ~
＊2	R337 3300 → 2700	S/N 11328 ~


1
2
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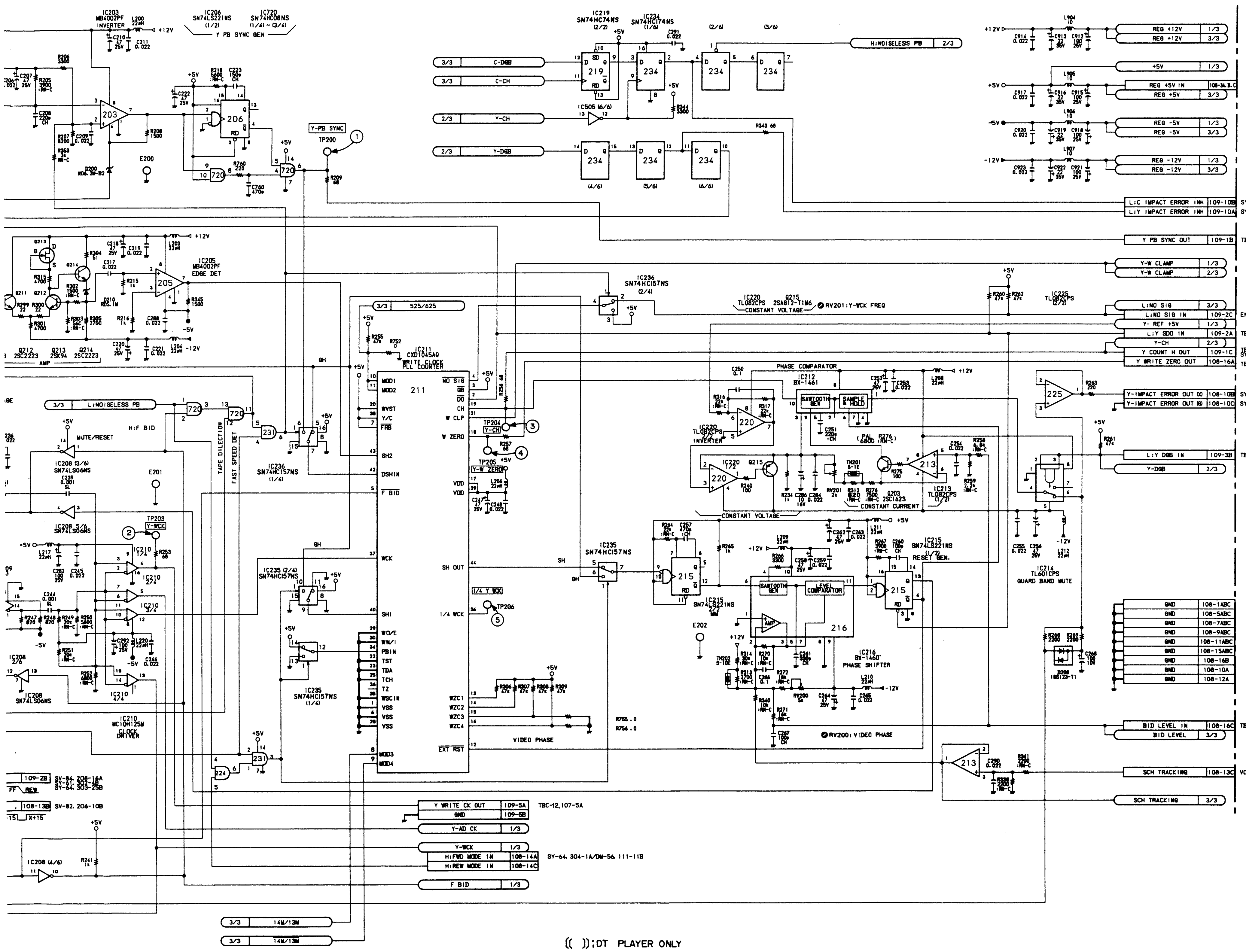
5
A
B
C
D
E
F
G
H
1/3 Y-SYNC SEP VIDEO
2/3 Y-W CLAMP
TBC-12,107-1A 109-1A Y GATED H IN
SY-64, 303-17A 108-12B Y-IMPACT ERROR IN (1)
SY-64, 303-17B 108-12C Y-IMPACT ERROR IN (2)
3/3 C WCLP INHI
108-13A ANALOG TAPE SPEED
DM-56, 111-8B/ TBC-12,107-3A 109-3A L:F BID IN
3/3 L:F BID
IC700 TL601CPS
IC701 CX20158
IC702 CXD1217M
IC238 (1/2) SN74LS221NS
IC206 (2/2) SN74LS221NS
IC231 SN74HC08NS (4/4)
IC218 TC74HC221AF (2/2)
IC505 (5/6) 74LS06
IC239 SN74HC00NS
Q220 2SK94
Q221 2SK94
Q204 2SC1623 BUFFER
IC240 TL601CPS
IC201 TA7357AP SYNC SEP
RIPPLE FILTER
SYNC SEP
HD GEN
Q205 2SC1623
Q206 2SC1623
Q207 2SC1623
AMP
Q208 2SK94 CLAMP
IC237 TL082CPS (1/2)
IC217 μPC31982 (1/2) SYNC SEP
Q229 2SC3326
Q230 2SC3326
IC218 TC74HC221AF (1/2)
CLAMP PULSE GEN
IC217 μPC31982 (2/2) COMPARATOR
DIFF
Q211 2SC2223
Q212 2SC2223
Q213 2SK94
IC225 TL082CPS INV. AMP
IC226 TL601CPS
HINOISELESS PB 2/3
Y-DOB 2/3
LV200: Y-WCK ERROR VOLTAGE
Q201 2SC1623 VCO
IC207 TL082CPS 1/2 INV. AMP
NORMAL ERROR
TP201
IC238 SN74LS221NS (2/2)
Q223 2SK152
Y-REF ERROR
TP207
IC228 INV. AMP
RV202: FRB OFFSET
Q222 2SC3326
IC239 SN74HC00NS
IC224 TC74HC08F
IC219 SN74HC74NS (1/2)
IC234 SN74HC157NS
IC235 SN74HC157NS
IC241 UPC3938 (2/2)
IC237 TL082CPS (2/2)
IC222 UPC33982
Q224 DTC114EK
Q225 DTC114EK
Q226 DTC114EK
Q227 DTC114EK
Q228 DTC114EK
IC228 TL082CPS
RV203: FFB OFFSET
IC232 TL601CPS
IC207 TL082CPS (1/2) ADDER
FRB ERROR
TP202
IC221 TL601CPS
IC208 (1/6)
IC209 373
IC209 MC10H116M VCO
IC208 SN74LS06NS
IC222 μPC33982
IC223 SN74HC86NS (1/4)
IC224 SN74HC08NS (4/4)
IC241 μPC3938 (1/2)
IC223 SN74HC86NS
TAPE DIRECTION 109-2B
FAST SPEED DET 108-13B
TEST3
LOCK RANGE EXPANDER
Y-DSH IN
TP208
1R13


IC203 MB4002PF INVERTER
IC206 SN74LS221NS (1/2)
IC720 SN74HC08NS (1/4)-(3/4)
Y PB SYNC GEN
Y-PB SYNC
TP200
E200
IC219 SN74HC74NS (2/2)
IC234 SN74HC174NS (1/6)
C-DGB
C-CH
Y-CH
Y-DGB
IC505 (6/6)
H:NOISELESS PB
REG +12V
REG +5V IN
REG +5V
REG -5V
REG -12V
L:C IMPACT ERROR INH
L:Y IMPACT ERROR INH
Y PB SYNC OUT
Y-W CLAMP
IC205 MB4002PF EDGE DET
AMP
IC236 SN74HC157NS (2/4)
IC220 TL082CPS
Q215 2SA812-T1M6
RV201:Y-WCK FREQ
CONSTANT VOLTAGE
IC225 TL082CPS (2/2)
L:NO SIG
L:NO SIG IN
Y- REF +5V
L:Y SDO IN
Y COUNT H OUT
Y WRITE ZERO OUT
525/625
IC211 CXD1045AQ WRITE CLOCK PLL COUNTER
PHASE COMPARATOR
IC212 BX-1461
SAWTOOTH GEN
SAMPLE & HOLD
Y-IMPACT ERROR OUT
L:NOISELESS PB
H:F BID
MUTE/RESET
IC208 (3/6) SN74LS06NS
TAPE DIRECTION
FAST SPEED DET
IC236 SN74HC157NS (1/4)
TP204 Y-CH
TP205 Y-W ZERO
IC213 TL082CPS
CONSTANT CURRENT
L:Y DGB IN
Y-DGB
TP203 Y-WCK
IC210
IC235 SN74HC157NS
IC215 SN74LS221NS (1/2) RESET GEN.
IC214 TL601CPS GUARD BAND MUTE
IC235 (2/4) SN74HC157NS
SH OUT
1/4 Y WCK
TP206
1/4 WCK
LEVEL COMPARATOR
216
IC216 BX-1460 PHASE SHIFTER
RV200:VIDEO PHASE
VIDEO PHASE
EXT RST
GND
IC206 SN74LS06NS
IC210 MC10H125M CLOCK DRIVER
BID LEVEL IN
BID LEVEL
SCH TRACKING
Y WRITE CK OUT
Y-AD CK
Y-WCK
H:FWD MODE IN
H:REW MODE IN
F BID
14M/13M
IC208 (4/6)

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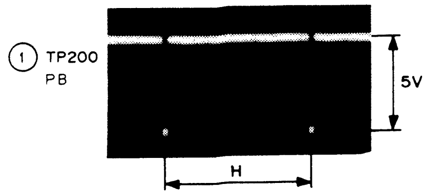
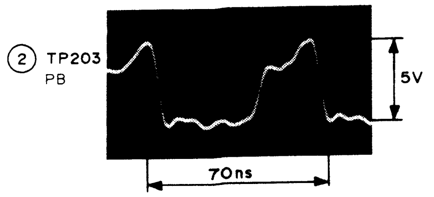
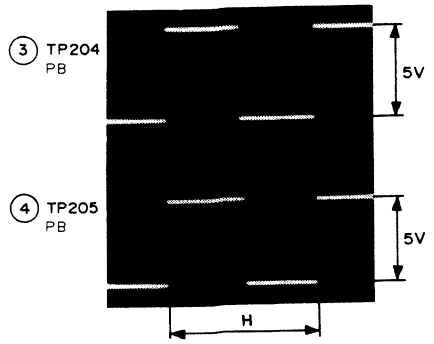
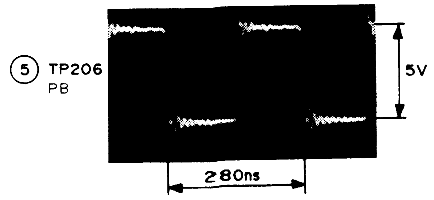
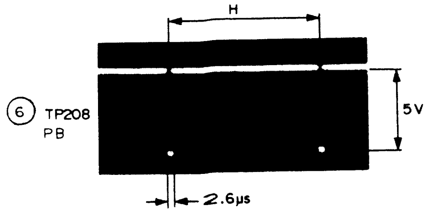










TBC-7D(2/3)

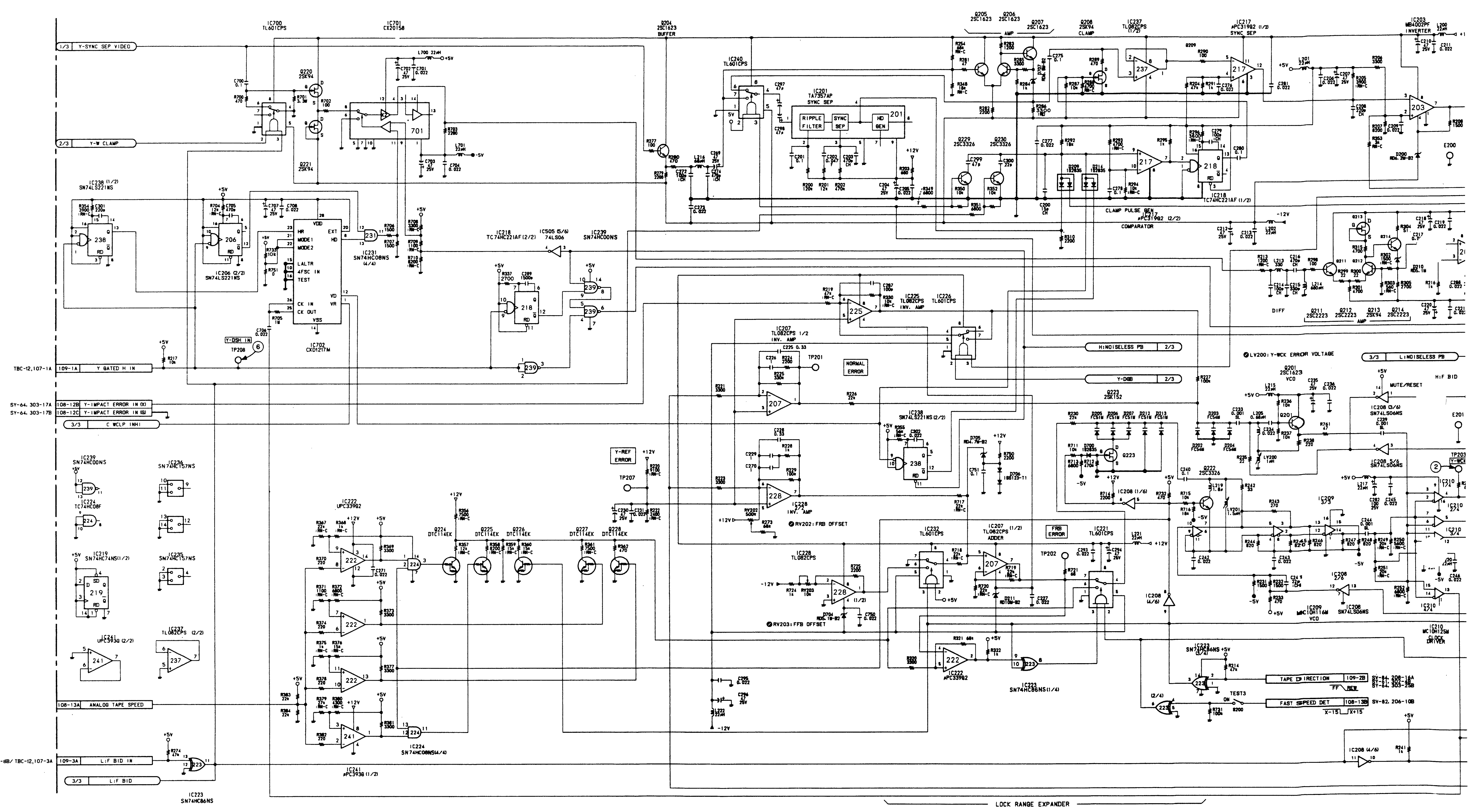
1-622-548-14, 15

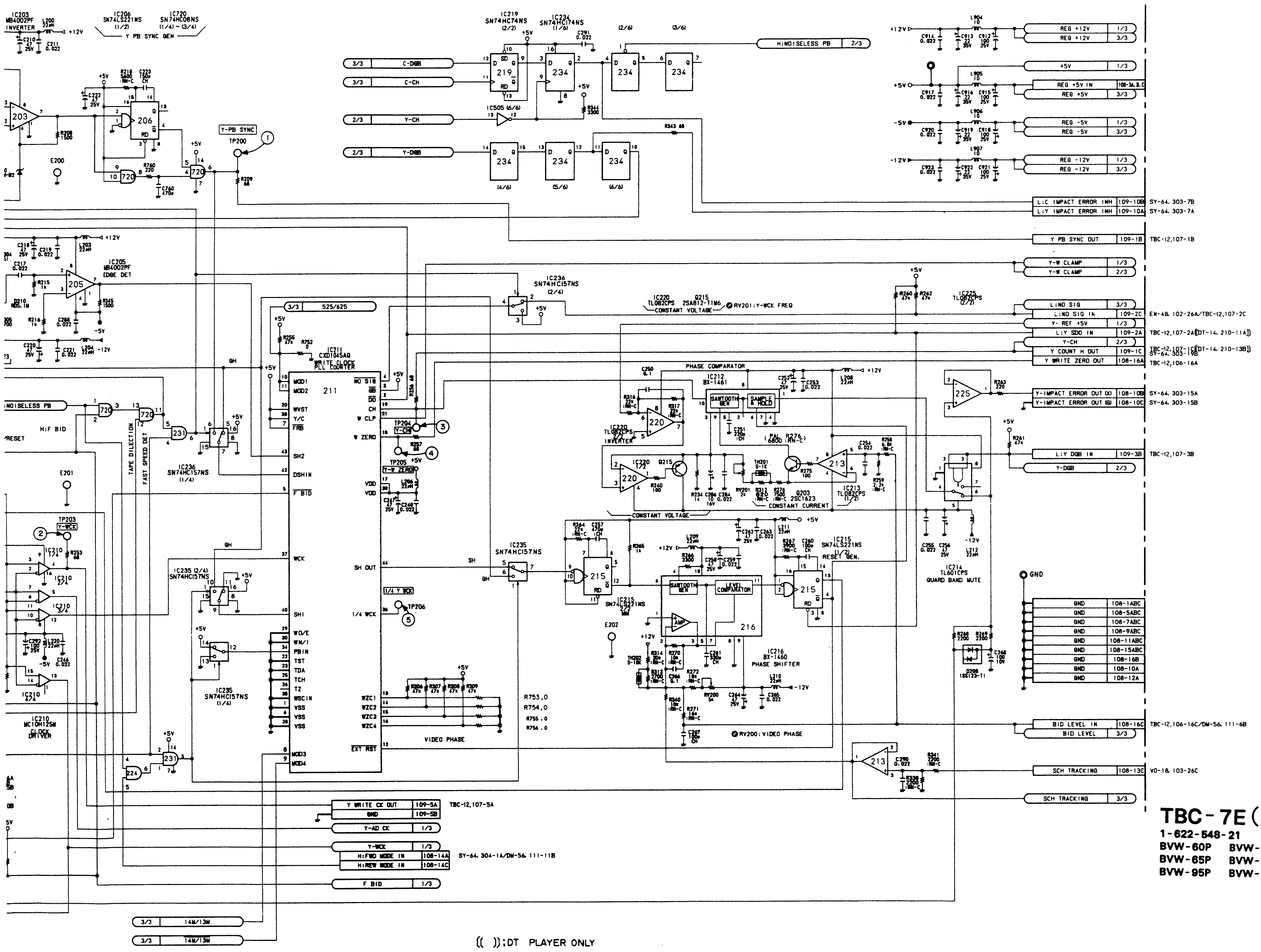
BVW-60P	BVW-70P
BVW-65P	BVW-75P
BVW-95P	BVW-96P

TBC－7E（2／3）

** TBC－7E (2/3); Y WRITE CLOCK GENERATOR

S/N 11739 and higher


1/3 Y-SYNC SEP VIDEO
2/3 Y-W CLAMP
IC700 TL601CPS
IC701 CX20158
L700 22mH
Q220 2SK94
Q221 2SK94
Q204 2SC1623 BUFFER
IC240 TL601CPS
IC201 TA7357AP SYNC SEP
RIPPLE FILTER
SYNC SEP
HD GEN
Q205 2SC1623
Q206 2SC1623
Q207 2SC1623
AMP
Q208 2SK94 CLAMP
IC237 TL082CPS (1/2)
IC217 μPC319B2 (1/2) SYNC SEP
IC203 MB4002PF INVERTER
Q229 2SC3326
Q230 2SC3326
CLAMP PULSE GEN
IC217 μPC319B2 (2/2) COMPARATOR
IC218 TC74HC221AF (1/2)
DIFF
Q211 2SC2223
Q212 2SC2223
Q213 2SK94
Q214 2SC2223
AMP
IC238 (1/2) SN74LS221NS
IC206 (2/2) SN74LS221NS
IC702 CXD1217M
HR
MODE1
MODE2
LALTR
4FSC IN
TEST
CK IN
CK OUT
VDD
VSS
EXT
HD
VD
VR
IC231 SN74HC08NS (4/4)
IC218 TC74HC221AF (2/2)
IC505 (5/6) 74LS06
IC239 SN74HC00NS
Y-DSH IN
TP208
TBC-12,107-1A
109-1A Y GATED H IN
IC225 TL082CPS INV. AMP
IC226 TL601CPS
IC207 TL082CPS 1/2 INV. AMP
TP201
NORMAL ERROR
H:NOISELESS PB 2/3
Y-DGB 2/3
LV200: Y-WCK ERROR VOLTAGE
3/3 L:NOISELESS PB
H:F BID
SY-64, 303-17A
SY-64, 303-17B
108-12B Y-IMPACT ERROR IN (X)
108-12C Y-IMPACT ERROR IN (Q)
3/3 C WCLP INH
IC238 SN74LS221NS (2/2)
Y-REF ERROR
TP207
IC228 TL082CPS INV. AMP
RV202: FRB OFFSET
Q223 2SK152
Q201 2SC1623 VCO
MUTE/RESET
IC208 (3/6) SN74LS06NS
E201
TP203
Y-WCK
IC239 SN74HC00NS
IC236 SN74HC157NS
IC224 TC74HC08F
IC219 SN74HC74NS (1/2)
IC235 SN74HC157NS
IC241 UPC393G (2/2)
IC237 TL082CPS (2/2)
IC222 UPC339B2
Q224 DTC114EK
Q225 DTC114EK
Q226 DTC114EK
Q227 DTC114EK
Q228 DTC114EK
IC232 TL601CPS
IC207 TL082CPS (1/2) ADDER
FRB ERROR
IC221 TL601CPS
TP202
IC228 TL082CPS
RV203: FFB OFFSET
Q222 2SC3326
IC208 (1/6)
IC209 MC10H116M VCO
IC208 SN74LS06NS
IC210 MC10H125M CLOCK DRIVER
IC222 μPC339B2
IC223 SN74HC86NS (1/4)
IC223 SN74HC86NS (3/4)
TEST3
TAPE DIRECTION 109-2B
FF REW
SV-84, 206-16A
SV-84, 206-18A
SV-64, 303-25B
FAST SPEED DET 108-13B
SV-82, 206-10B
X-15 X+15
108-13A ANALOG TAPE SPEED
IC224 SN74HC08NS (4/4)
IC241 μPC393G (1/2)
DM-56, 111-8B/TBC-12,107-3A
109-3A L:F BID IN
3/3 L:F BID
IC223 SN74HC86NS
IC208 (4/6)
LOCK RANGE EXPANDER
E200
1
2
3
4
5


IC203 MB4002PF INVERTER
IC206 SN74LS221NS (1/2)
IC720 SN74HC08NS (1/4)-(3/4)
Y PB SYNC GEN
Y-PB SYNC
TP200
IC219 SN74HC74NS (2/2)
IC234 SN74HC174NS (1/6)
C-DGB
C-CH
Y-CH
Y-DGB
IC505 (6/6)
H:NOISELESS PB
REG +12V
REG -12V
REG +5V IN
REG -5V
L:C IMPACT ERROR INH
L:Y IMPACT ERROR INH
Y PB SYNC OUT
Y-W CLAMP
IC205 MB4002PF EDGE DET
IC236 SN74HC157NS (2/4)
IC220 TL082CPS CONSTANT VOLTAGE
Q215 2SA812-11M6
RV201:Y-WCK FREQ
IC225 TL082CPS (2/2)
L:NO SIG
Y-REF +5V
L:Y SDO IN
Y COUNT H OUT
Y WRITE ZERO OUT
525/625
IC211 CXD1045AQ WRITE CLOCK PLL COUNTER
PHASE COMPARATOR
IC212 BX-1461
SAWTOOTH GEN
SAMPLE & HOLD
INVERTER
CONSTANT CURRENT
IC213 TL082CPS (1/2)
Y-IMPACT ERROR OUT
L:Y DGB IN
H:NOISELESS PB
H:F BID
TAPE DIRECTION
FAST SPEED DET
IC236 SN74HC157NS (1/4)
TP204 Y-CH
TP205 Y-W ZERO
IC235 SN74HC157NS
IC215 SN74LS221NS (1/2) RESET GEN.
IC214 TL601CPS GUARD BAND MUTE
GND
TP203 Y-WCK
IC210 MC10H125M CLOCK DRIVER
IC235 (2/4) SN74HC157NS
1/4 Y WCK
TP206
IC216 BX-1460 PHASE SHIFTER
LEVEL COMPARATOR
AMP
RV200:VIDEO PHASE
VIDEO PHASE
R753,0
R754,0
R755,0
R756,0
BID LEVEL IN
BID LEVEL
SCH TRACKING
Y WRITE CK OUT
Y-AD CK
Y-WCK
H:FWD MODE IN
H:REW MODE IN
F BID
14M/13M
TBC-12,107-5A
SY-64, 304-1A/DM-56, 111-11B
VO-18, 103-26C
TBC-12,106-16C/DM-56, 111-6B

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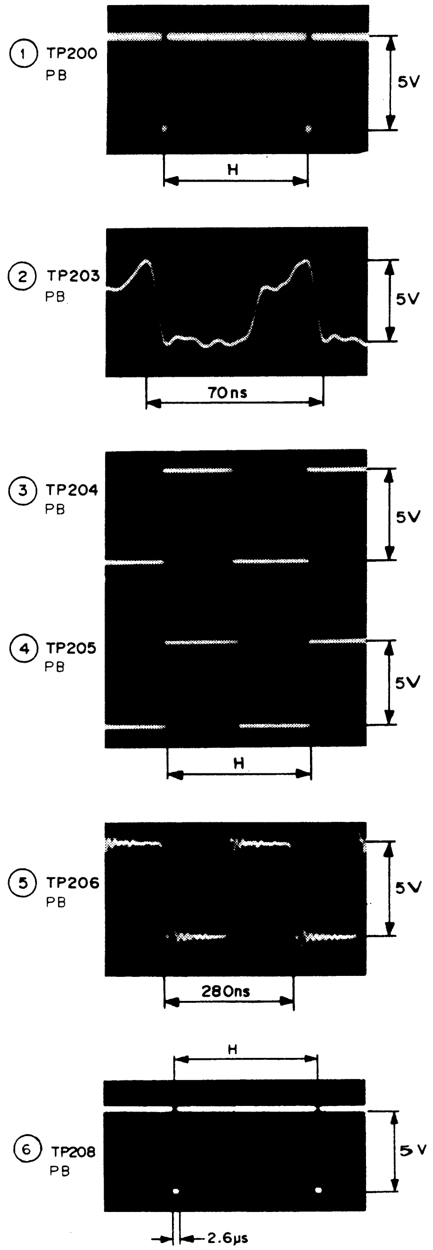


TBC-7E(2/3)

1-622-548-21

BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

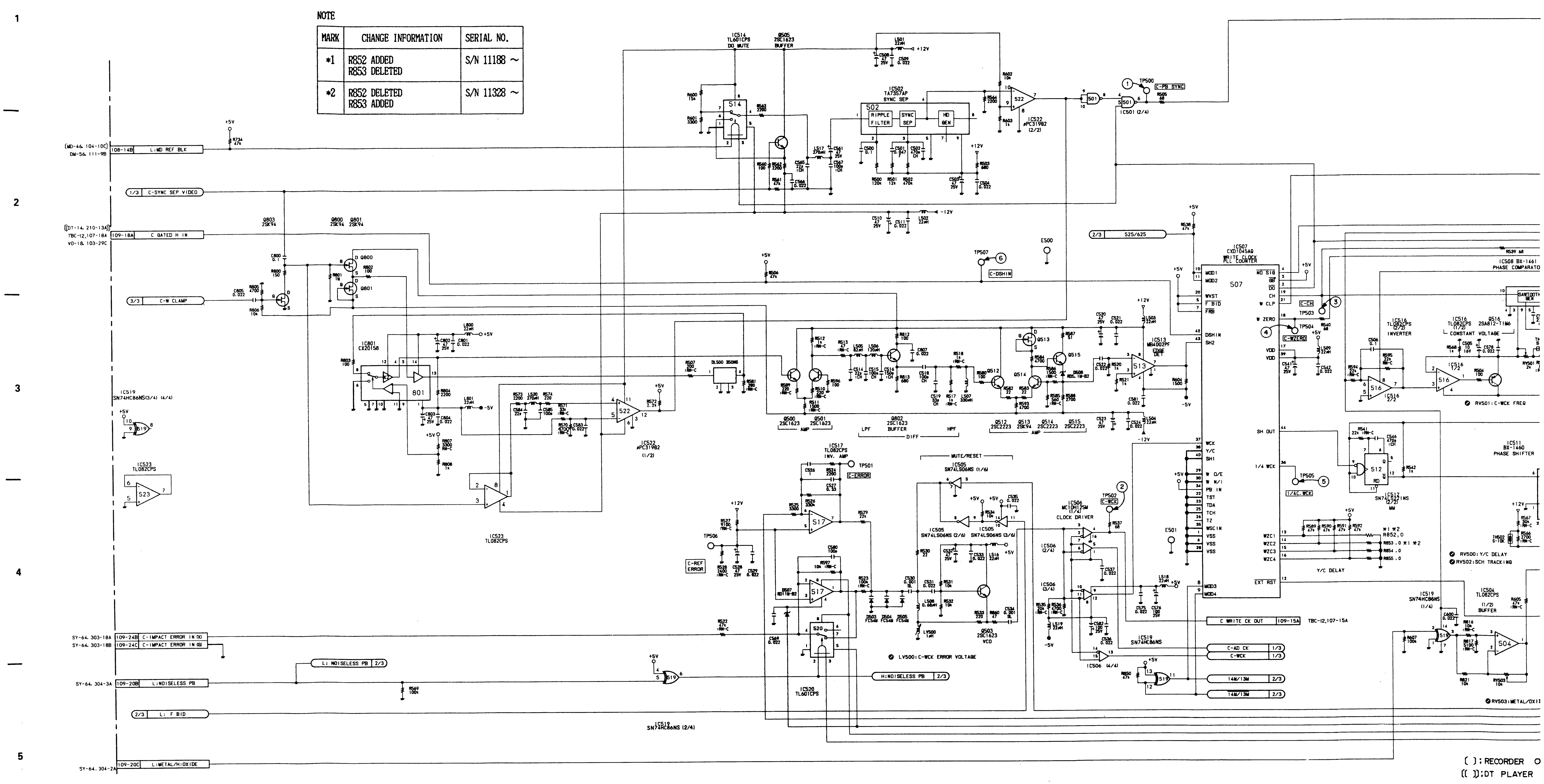
**

TBC-7D (3/3) ; C WRITE CLOCK GENERATOR

S/N 10713 through 11738

NOTE

MARK	CHANGE INFORMATION	SERIAL NO.
*1	R852 ADDED R853 DELETED	S/N 11188 ~
*2	R852 DELETED R853 ADDED	S/N 11328 ~


1
2
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5
IC514 TL601CPS DO MUTE
Q505 2SC1623 BUFFER
IC502 TA7357AP SYNC SEP
RIPPLE FILTER
SYNC SEP
HD GEN
IC522 μPC319B2 (2/2)
IC501 (2/4)
TP500
C-PB SYNC
L:MD REF BLK
C-SYNC SEP VIDEO
C GATED H IN
C-W CLAMP
Q803 2SK94
Q800 Q801 2SK94
IC801 CX20156
DL500 350NS
IC519 SN74HC86NS(3/4) (4/4)
IC523 TL082CPS
IC522 μPC319B2 (1/2)
Q500 2SC1623 AMP
Q501 2SC1623
Q502 2SC1623 BUFFER
LPF
DIFF
HPF
Q512 2SC2223
Q513 2SK94
Q514 2SC2223 AMP
Q515 2SC2223
IC513 MB4002PF EDGE DET
TP507
C-DSHIN
E500
525/625
IC507 CXD1045AQ WRITE CLOCK PLL COUNTER
MOD1
MOD2
WVST
F BID
FRB
DSHIN
SH2
WCK
Y/C
SH1
W O/E
W N/I
PB IN
TST
TDA
TCH
TZ
WSCIN
VSS
MOD3
MOD4
NO SIG
DO
CH
W CLP
W ZERO
VDD
SH OUT
1/4 WCK
WZC1
WZC2
WZC3
WZC4
EXT RST
TP503
C-CH
TP504
C-WZERO
TP505
1/4C.WCK
IC508 BX-1461 PHASE COMPARATOR
IC516 TL082CPS (2/2) INVERTER
IC516 TL082CPS (1/2) CONSTANT VOLTAGE
Q516 2SA812-T1M6
RV501:C-WCK FREQ
IC511 BX-1460 PHASE SHIFTER
IC512 SN74HC221NS (2/2) MM
*1 *2 R852, 0
R853, 0 *1 *2
R854, 0
R855, 0
Y/C DELAY
RV500:Y/C DELAY
RV502:SCH TRACKING
IC519 SN74HC86NS (1/4)
IC504 TL082CPS (1/2) BUFFER
RV503:METAL/OXI
IC517 TL082CPS INV. AMP
TP501
C-ERROR
TP506
C-REF ERROR
MUTE/RESET
IC505 SN74LS06NS (1/6)
IC505 SN74LS06NS (2/6)
IC505 SN74LS06NS (3/6)
IC506 MC10H125M (1/4) CLOCK DRIVER
TP502
C-WCK
E501
IC506 (2/4)
IC506 (3/4)
IC506 (4/4)
IC519 SN74HC86NS
Q503 2SC1623 VCO
LV500:C-WCK ERROR VOLTAGE
IC520 TL601CPS
C WRITE CK OUT
TBC-12,107-15A
C-AD CK
C-WCK
14M/13M
IC519 SN74HC86NS (2/4)
L: NOISELESS PB
H:NOISELESS PB
L: F BID
C-IMPACT ERROR IN (D)
C-IMPACT ERROR IN (B)
L:NOISELESS PB
L:METAL/H:OXIDE
(MD-46, 104-10C) DM-56, 111-9B
108-14B
[[DT-14, 210-13A]] TBC-12,107-18A VO-18, 103-29C
109-18A
SY-64, 303-18A
SY-64, 303-18B
SY-64, 304-3A
SY-64, 304-2A
109-24B
109-24C
109-20B
109-20C
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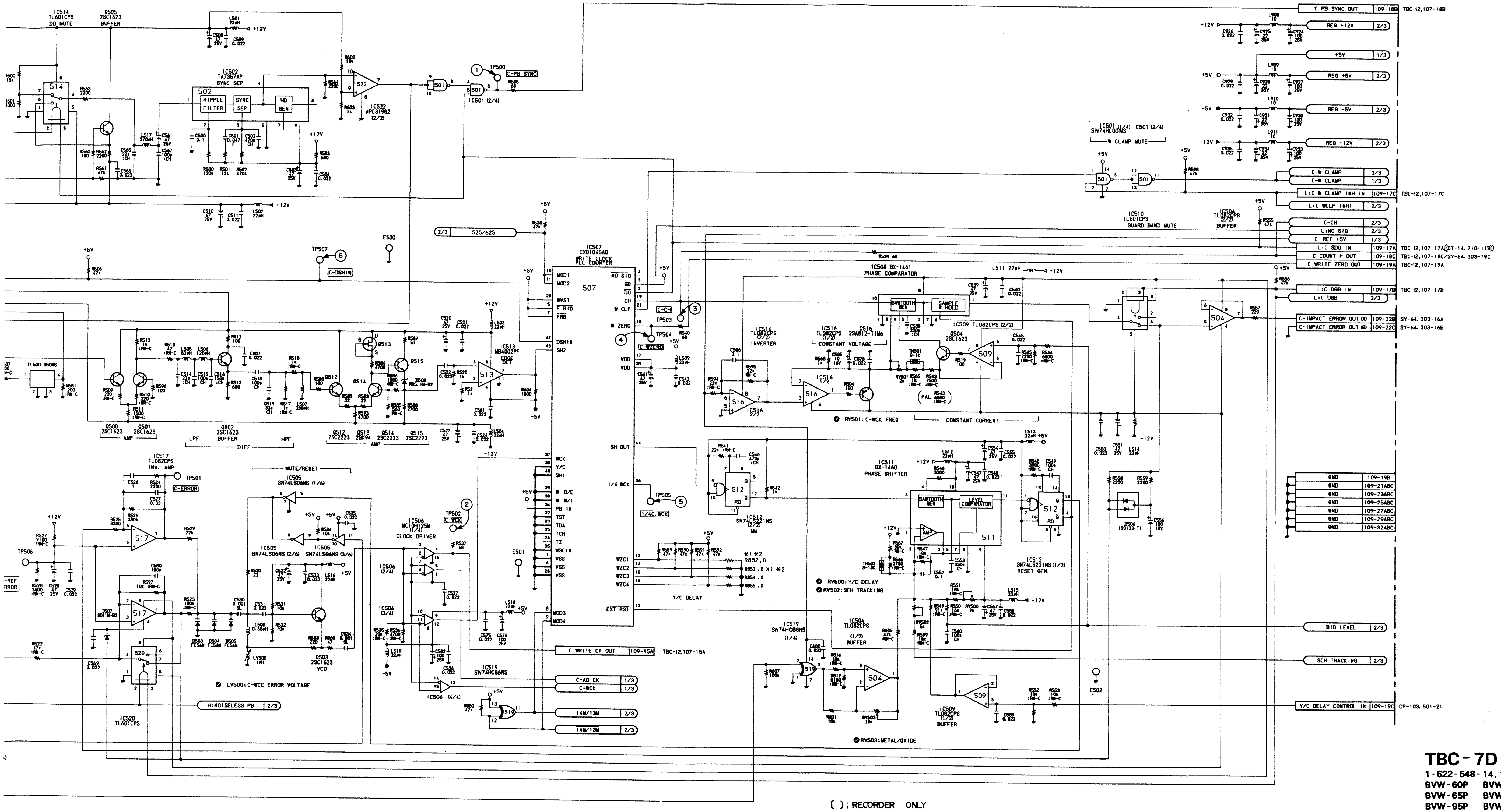
[[ ]];DT PLAYER

TBC-7D (3/3)　TBC-7D (3/3)

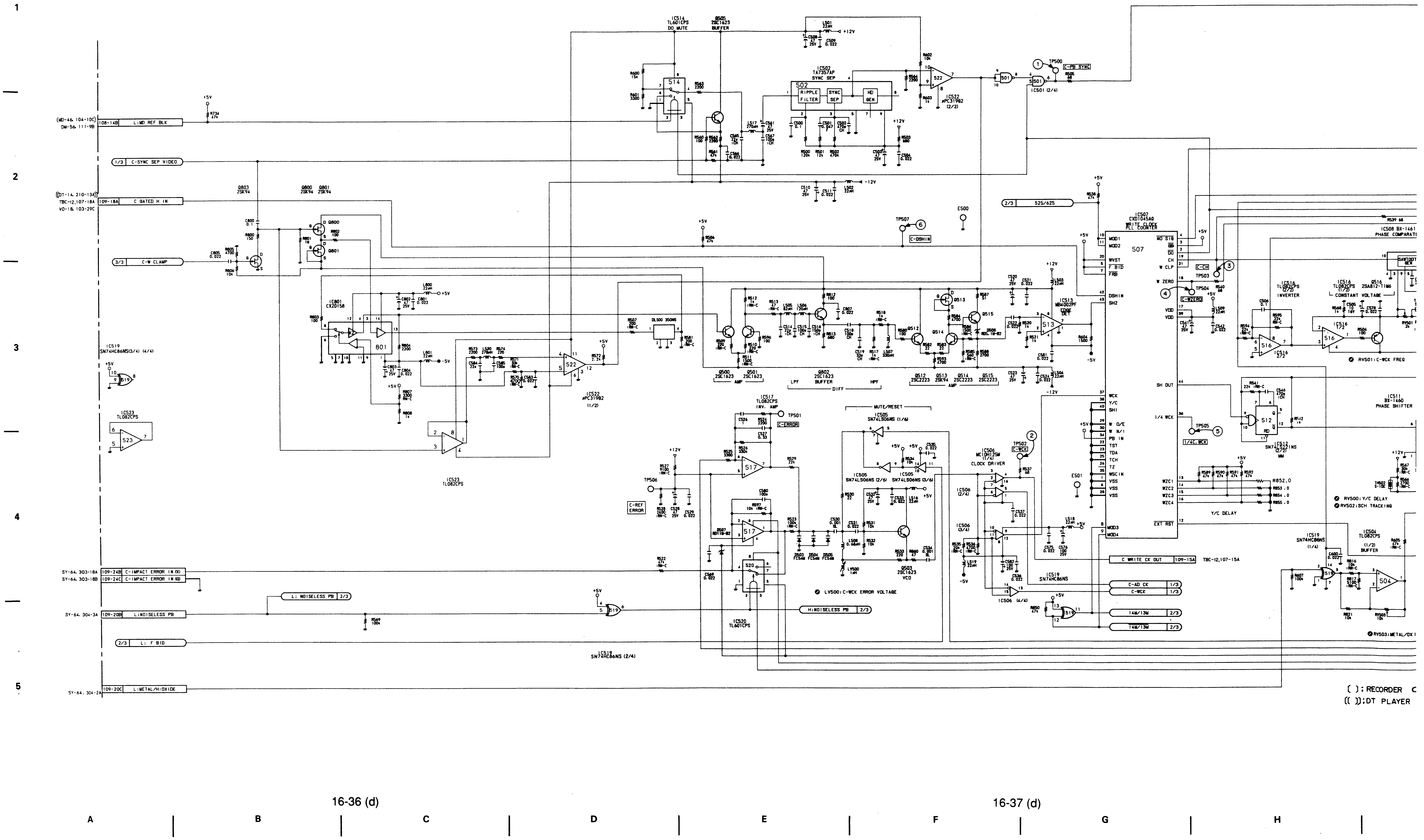

IC514 TL601CPS DO MUTE
Q505 2SC1623 BUFFER
IC502 TA7357AP SYNC SEP
RIPPLE FILTER
SYNC SEP
HD GEN
IC522 μPC319B2 (2/2)
IC501 (2/4)
TP500
C-PB SYNC
C PB SYNC OUT
REG +12V
+5V
REG +5V
REG -5V
REG -12V
IC501 (1/4) IC501 (2/4) SN74HC00NS
W CLAMP MUTE
C-W CLAMP
L:C W CLAMP INH IN
L:C WCLP INHI
IC510 TL601CPS GUARD BAND MUTE
IC504 TL082CPS (2/2) BUFFER
C-CH
L:NO SIG
C-REF +5V
L:C SDO IN
C COUNT H OUT
C WRITE ZERO OUT
L:C DGB IN
L:C DGB
C-IMPACT ERROR OUT 00
C-IMPACT ERROR OUT 01
TBC-12,107-18B
TBC-12,107-17C
TBC-12,107-17A
TBC-12,107-18C/SY-64 303-19C
TBC-12,107-19A
TBC-12,107-17B
SY-64 303-16A
SY-64 303-16B
525/625
TP507
C-DSHIN
E500
IC507 CXD1045AQ WRITE CLOCK PLL COUNTER
IC508 BX-1461 PHASE COMPARATOR
SAWTOOTH GEN
SAMPLE & HOLD
IC516 TL082CPS (2/2) INVERTER
IC516 TL082CPS (1/2) CONSTANT VOLTAGE
Q516 2SA812-T1M6
Q504 2SC1623
IC509 TL082CPS (2/2)
CONSTANT CURRENT
RV501: C-WCK FREQ
DL500 350NS
Q509 2SC1623 AMP
Q501 2SC1623
Q802 2SC1623 BUFFER
LPF
HPF
DIFF
Q512 2SC2223
Q513 2SK94
Q514 2SC2223
Q515 2SC2223
AMP
IC513 MB4002PF EDGE DET
TP504
C-WZERO
TP503
C-CH
IC517 TL082CPS INV. AMP
TP501
C-ERROR
MUTE/RESET
IC505 SN74LS06NS (1/6)
IC505 SN74LS06NS (2/6)
IC505 SN74LS06NS (3/6)
IC506 MC10H125M (1/4) CLOCK DRIVER
TP502
C-WCK
E501
TP505
1/4C.WCK
IC512 SN74LS221NS (2/2) MM
IC511 BX-1460 PHASE SHIFTER
SAWTOOTH GEN
LEVEL COMPARATOR
AMP
IC512 SN74LS221NS (1/2) RESET GEN.
Y/C DELAY
RV500: Y/C DELAY
RV502: SCH TRACKING
IC520 TL601CPS
H:NOISELESS PB
LV500: C-WCK ERROR VOLTAGE
Q503 2SC1623 VCO
C WRITE CK OUT
TBC-12,107-15A
C-AD CK
C-WCK
14M/13M
IC506 (2/4)
IC506 (3/4)
IC506 (4/4)
IC519 SN74HC86NS
IC519 SN74HC86NS (1/4)
IC504 TL082CPS (1/2) BUFFER
RV503: METAL/OXIDE
IC509 TL082CPS (1/2) BUFFER
E502
BID LEVEL
SCH TRACKING
Y/C DELAY CONTROL IN
CP-103 501-21
GND
D506 1SS123-T1
TP506

TBC-7D(3/3)
1-622-548-14, 15
BVW-60P　BVW-70P
BVW-65P　BVW-75P
BVW-95P　BVW-96P

[ ]; RECORDER ONLY
[[ ]];DT PLAYER ONLY

**TBC−7E (3/3); C WRITE CLOCK GENERATOR

S/N 11739 and higher



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A
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C
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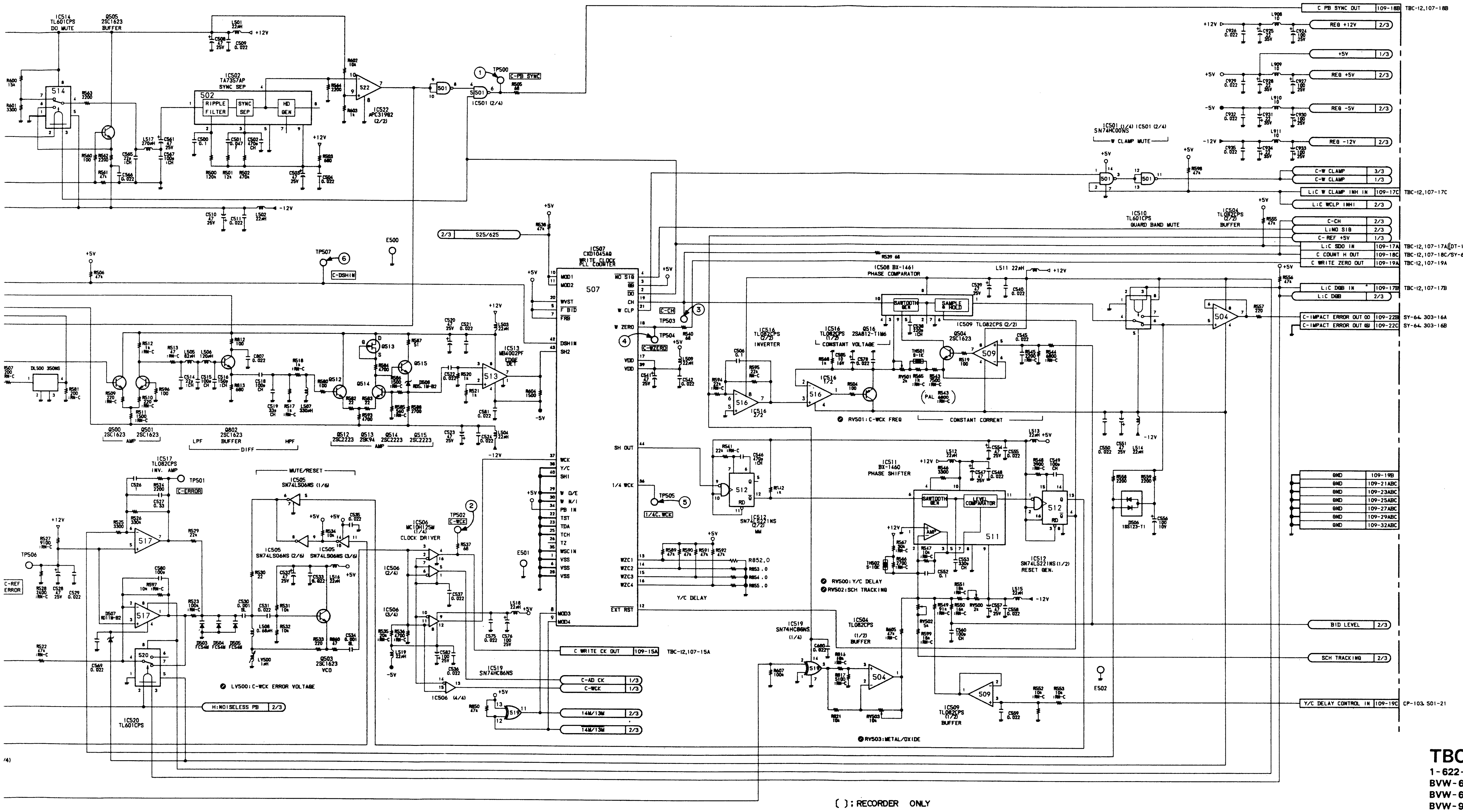
E
F
G
H
L:MD REF BLK
C-SYNC SEP VIDEO
C GATED H IN
C-W CLAMP
C-IMPACT ERROR IN (X)
C-IMPACT ERROR IN (Y)
L:NOISELESS PB
L: F BID
L:METAL/H:OXIDE
IC514 TL601CPS DO MUTE
Q505 2SC1623 BUFFER
IC502 TA7357AP SYNC SEP
RIPPLE FILTER
SYNC SEP
HD GEN
IC522 μPC319B2 (2/2)
IC501 (2/4)
TP500
C-PB SYNC
IC801 CX20158
Q800 Q801 2SK94
Q803 2SK94
DL500 350NS
IC522 μPC319B2 (1/2)
IC523 TL082CPS
IC519 SN74HC86NS(3/4) (4/4)
Q500 2SC1623 AMP
Q501 2SC1623
Q802 2SC1623 BUFFER
LPF
DIFF
HPF
Q512 2SC2223
Q513 2SK94
Q514 2SC2223
Q515 2SC2223
AMP
IC513 MB4002PF EDGE DET
TP507
C-DSHIN
E500
IC507 CXD1045AQ WRITE CLOCK PLL COUNTER
507
IC517 TL082CPS INV. AMP
TP501
C-ERROR
C-REF ERROR
TP506
MUTE/RESET
IC505 SN74LS06NS (1/6)
IC505 SN74LS06NS (2/6)
IC505 SN74LS06NS (3/6)
Q503 2SC1623 VCO
LV500:C-WCK ERROR VOLTAGE
IC520 TL601CPS
IC519 SN74HC86NS (2/4)
H:NOISELESS PB
TP502
C-WCK
IC506 MC10H125M (1/4) CLOCK DRIVER
E501
IC506 (2/4)
IC506 (3/4)
IC506 (4/4)
IC519 SN74HC86NS
C WRITE CK OUT
TBC-12,107-15A
C-AD CK
C-WCK
14M/13M
525/625
TP503
C-CH
TP504
C-WZERO
TP505
1/4C.WCK
IC508 BX-1461 PHASE COMPARATOR
IC516 TL082CPS INVERTER
IC516 TL082CPS (1/2) CONSTANT VOLTAGE
Q516 2SA812-T1M6
RV501:C-WCK FREQ
IC512 SN74HC221NS (2/2) MM
IC511 BX-1460 PHASE SHIFTER
Y/C DELAY
RV500:Y/C DELAY
RV502:SCH TRACKING
IC519 SN74HC86NS (1/4)
IC504 TL082CPS (1/2) BUFFER
RV503:METAL/OX
( ); RECORDER
(( )); DT PLAYER


IC514 TL601CPS DO MUTE
Q505 2SC1623 BUFFER
IC502 TA7357AP SYNC SEP
RIPPLE FILTER
SYNC SEP
HD GEN
IC522 μPC319B2 (2/2)
522
TP500
C-PB SYNC
IC501 (2/4)
501
L501 22μH
+12V
-12V
L502 22μH
E500
TP507
C-DSHIN
2/3
525/625
DL500 350NS
Q500 2SC1623 AMP
Q501 2SC1623
Q802 2SC1623 BUFFER
LPF
DIFF
HPF
Q512 2SC2223
Q513 2SK94
Q514 2SC2223
Q515 2SC2223
AMP
IC513 MB4002PF EDGE DET
513
IC507 CXD1045AQ WRITE CLOCK PLL COUNTER
507
MOD1
MOD2
WVST
F BID
FRB
DSHIN
SH2
NO SIB
GB
DO
CH
W CLP
W ZERO
VDD
SH OUT
1/4 WCK
WCK
Y/C
SH1
W O/E
W N/I
PB IN
TST
TDA
TCH
TZ
WSCIN
VSS
WZC1
WZC2
WZC3
WZC4
EXT RST
MOD3
MOD4
C-CH
TP503
TP504
C-WZERO
TP505
1/4C.WCK
Y/C DELAY
R852, 0
R853, 0
R854, 0
R855, 0
E501
IC517 TL082CPS INV. AMP
TP501
C-ERROR
517
TP506
C-REF ERROR
MUTE/RESET
IC505 SN74LS06NS (1/6)
IC505 SN74LS06NS (2/6)
IC505 SN74LS06NS (3/6)
Q503 2SC1623 VCO
LV500 1mH
LV500: C-WCK ERROR VOLTAGE
IC520 TL601CPS
520
H: NOISELESS PB
2/3
IC506 MC10H125M (1/4) CLOCK DRIVER
TP502
C-WCK
IC506 (2/4)
IC506 (3/4)
IC506 (4/4)
IC519 SN74HC86NS
519
C WRITE CK OUT
109-15A
TBC-12, 107-15A
C-AD CK
1/3
C-WCK
1/3
14M/13M
2/3
14M/13M
2/3
IC508 BX-1461 PHASE COMPARATOR
SAWTOOTH GEN
SAMPLE & HOLD
IC516 TL082CPS (2/2) INVERTER
IC516 TL082CPS (1/2) CONSTANT VOLTAGE
Q516 2SA812-T1M6
IC509 TL082CPS (2/2)
Q504 2SC1623
509
516
L511 22μH
CONSTANT CURRENT
PAL
RV501: C-WCK FREQ
IC512 SN74LS221NS (2/2) MM
512
IC511 BX-1460 PHASE SHIFTER
SAWTOOTH GEN
LEVEL COMPARATOR
AMP
511
IC512 SN74LS221NS (1/2) RESET GEN.
RV500: Y/C DELAY
RV502: SCH TRACKING
IC519 SN74HC86NS (1/4)
IC504 TL082CPS (1/2) BUFFER
504
IC509 TL082CPS (1/2) BUFFER
509
RV503: METAL/OXIDE
E502
D506 1SS123-T1
IC501 (1/4) IC501 (2/4) SN74HC00NS
W CLAMP MUTE
IC510 TL601CPS GUARD BAND MUTE
IC504 TL082CPS (2/2) BUFFER
504
C PB SYNC OUT
109-18B
TBC-12, 107-18B
+12V
L908 10
REG +12V
2/3
+5V
1/3
+5V
L909 10
REG +5V
2/3
-5V
L910 10
REG -5V
2/3
-12V
L911 10
REG -12V
2/3
C-W CLAMP
3/3
C-W CLAMP
1/3
L:C W CLAMP INH IN
109-17C
TBC-12, 107-17C
L:C WCLP INHI
2/3
C-CH
2/3
L:NO SIB
2/3
C-REF +5V
1/3
L:C SDO IN
109-17A
TBC-12, 107-17A [[DT-14. 210-11B]]
C COUNT H OUT
109-18C
TBC-12, 107-18C/SY-64. 303-19C
C WRITE ZERO OUT
109-19A
TBC-12, 107-19A
L:C DGB IN
109-17B
TBC-12, 107-17B
L:C DGB
2/3
C-IMPACT ERROR OUT (X)
109-22B
SY-64. 303-16A
C-IMPACT ERROR OUT (B)
109-22C
SY-64. 303-16B
GND
109-19B
GND
109-21ABC
GND
109-23ABC
GND
109-25ABC
GND
109-27ABC
GND
109-29ABC
GND
109-32ABC
BID LEVEL
2/3
SCH TRACKING
2/3
Y/C DELAY CONTROL IN
109-19C
CP-103. 501-21

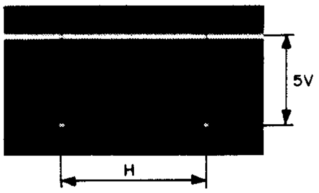
[ ]; RECORDER ONLY

[[ ]]; DT PLAYER ONLY

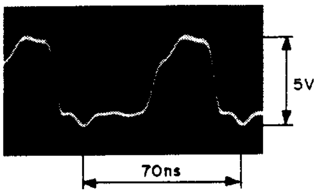
TBC-7E (3/3)
1-622-548-21
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

**

① TP500
PB

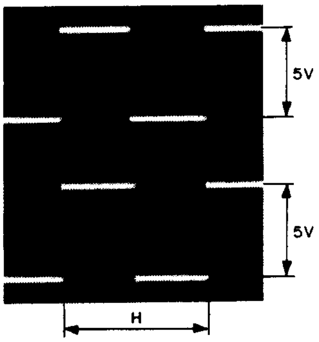


② TP502
PB

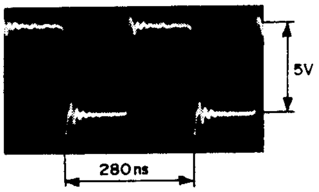


③ TP503
PB

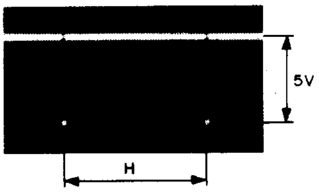
④ TP504
PB



⑤ TP505
PB



⑥ TP507
PB

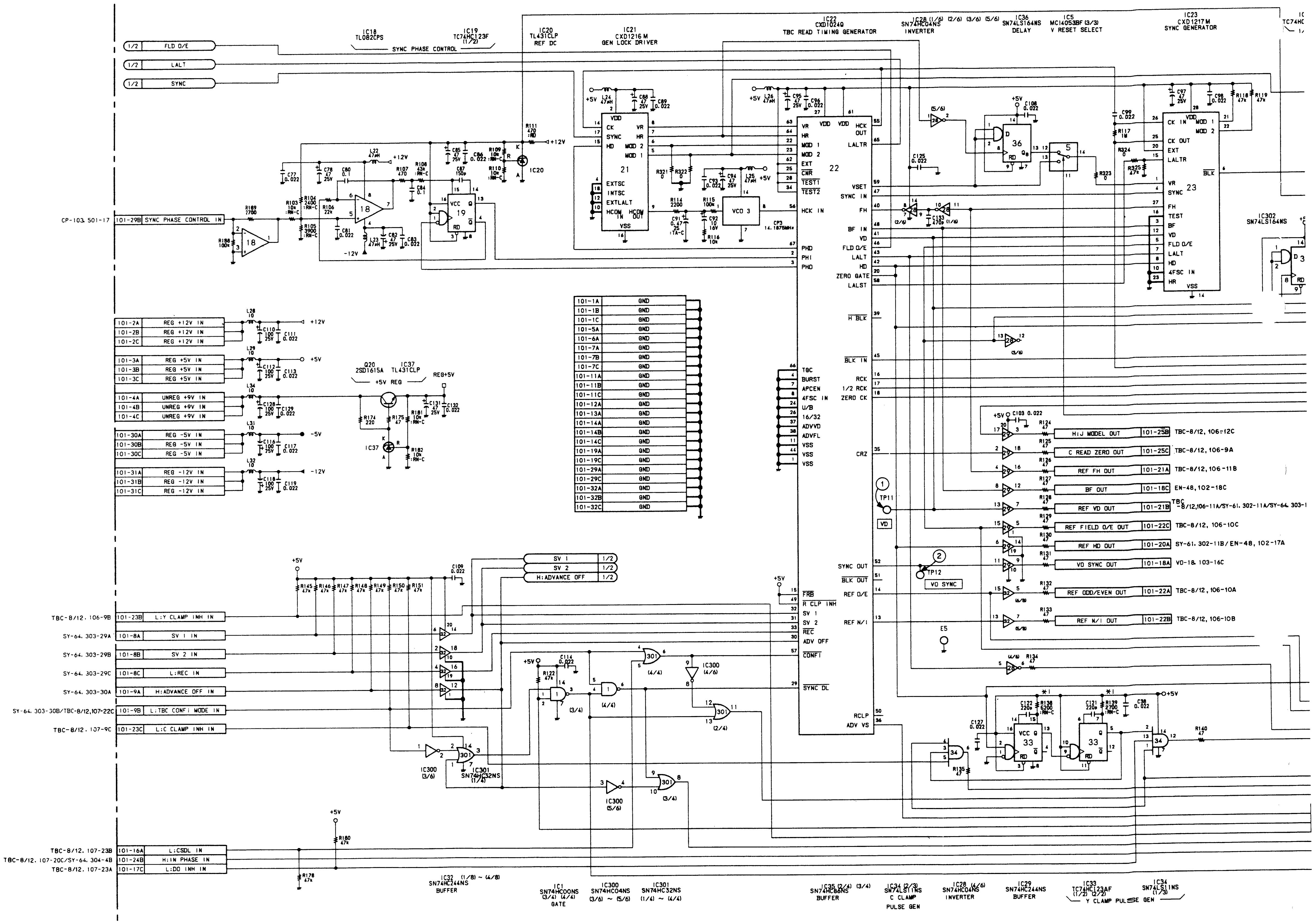


TBC-9P (2/2) ; TBC READ TIMING GENERATOR

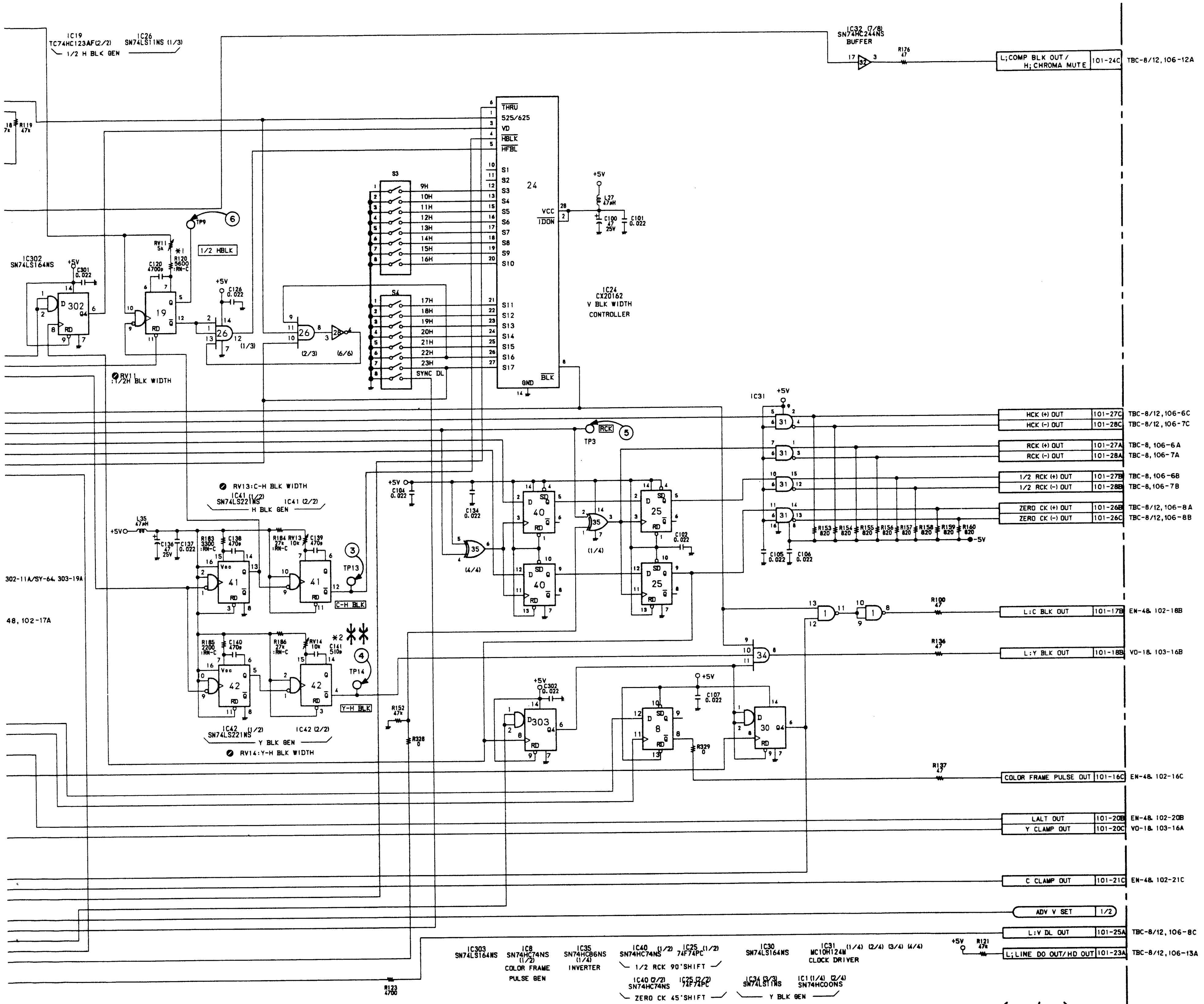
S/N 10061 and higher

NOTE

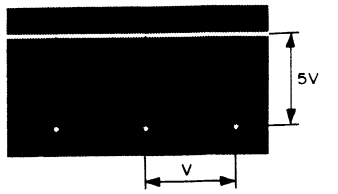
	MARK	CHANGE INFORMATION	SERIAL NO.
	*1	R120 13k → 5600 R138 8200 → 6200 R139 3900 → 2700	S/N 11328 ~
**	*2	C141 470p → 510p	S/N 11688 ~



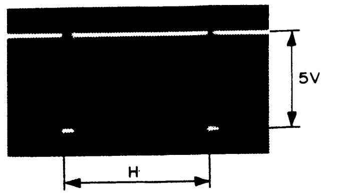
IC18 TL082CPS
IC19 TC74HC123F (1/2)
SYNC PHASE CONTROL
IC20 TL431CLP REF DC
IC21 CXD1216M GEN LOCK DRIVER
IC22 CXD1024Q TBC READ TIMING GENERATOR
IC28 (1/6) (2/6) (3/6) (5/6) SN74HC04NS INVERTER
IC36 SN74LS164NS DELAY
IC5 MC14053BF (3/3) V RESET SELECT
IC23 CXD1217M SYNC GENERATOR
TC74HC
IC302 SN74LS164NS
FLD O/E
LALT
SYNC
CP-103, 501-17
101-29B SYNC PHASE CONTROL IN
101-2A REG +12V IN
101-2B REG +12V IN
101-2C REG +12V IN
101-3A REG +5V IN
101-3B REG +5V IN
101-3C REG +5V IN
101-4A UNREG +9V IN
101-4B UNREG +9V IN
101-4C UNREG +9V IN
101-30A REG -5V IN
101-30B REG -5V IN
101-30C REG -5V IN
101-31A REG -12V IN
101-31B REG -12V IN
101-31C REG -12V IN
Q20 2SD1615A
IC37 TL431CLP
+5V REG
REG+5V
101-1A GND
101-1B GND
101-1C GND
101-5A GND
101-6A GND
101-7A GND
101-7B GND
101-7C GND
101-11A GND
101-11B GND
101-11C GND
101-12A GND
101-13A GND
101-14A GND
101-14B GND
101-14C GND
101-19A GND
101-19C GND
101-29A GND
101-29C GND
101-32A GND
101-32B GND
101-32C GND
VCO 3
CP3 14.1875MHz
SV 1
SV 2
H:ADVANCE OFF
TBC-8/12, 106-9B 101-23B L:Y CLAMP INH IN
SY-64, 303-29A 101-8A SV 1 IN
SY-64, 303-29B 101-8B SV 2 IN
SY-64, 303-29C 101-8C L:REC IN
SY-64, 303-30A 101-9A H:ADVANCE OFF IN
SY-64, 303-30B/TBC-8/12, 107-22C 101-9B L:TBC CONFI MODE IN
TBC-8/12, 107-9C 101-23C L:C CLAMP INH IN
TBC-8/12, 107-23B 101-16A L:CSDL IN
TBC-8/12, 107-20C/SY-64, 304-4B 101-24B H:IN PHASE IN
TBC-8/12, 107-23A 101-17C L:DO INH IN
H:J MODEL OUT 101-25B TBC-8/12, 106-12C
C READ ZERO OUT 101-25C TBC-8/12, 106-9A
REF FH OUT 101-21A TBC-8/12, 106-11B
BF OUT 101-18C EN-48, 102-18C
REF VD OUT 101-21B TBC-8/12,106-11A/SY-61, 302-11A/SY-64, 303-1
REF FIELD O/E OUT 101-22C TBC-8/12, 106-10C
REF HD OUT 101-20A SY-61, 302-11B/EN-48, 102-17A
VD SYNC OUT 101-18A VD-18, 103-16C
REF ODD/EVEN OUT 101-22A TBC-8/12, 106-10A
REF N/I OUT 101-22B TBC-8/12, 106-10B
TP11 VD
TP12 VD SYNC
E5
IC32 (1/8) ~ (4/8) SN74HC244NS BUFFER
IC1 SN74HC00NS (3/4) (4/4) GATE
IC300 SN74HC04NS (3/6) ~ (5/6)
IC301 SN74HC32NS (1/4) ~ (4/4)
IC35 (2/4) (3/4) SN74HC86NS BUFFER
IC34 (2/3) SN74LS11NS C CLAMP PULSE GEN
IC28 (4/6) SN74HC04NS INVERTER
IC29 SN74HC244NS BUFFER
IC33 TC74HC123AF (1/2) (2/2)
IC34 SN74LS11NS (1/3)
Y CLAMP PULSE GEN


IC19 TC74HC123AF(2/2) IC26 SN74LS11NS (1/3)
1/2 H BLK GEN
IC32 (7/8) SN74HC244NS BUFFER
L;COMP BLK OUT/ H;CHROMA MUTE
101-24C
TBC-8/12, 106-12A
IC24 CX20162 V BLK WIDTH CONTROLLER
THRU
525/625
VD
HBLK
HFBL
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
S16
S17
BLK
GND
VCC
IDON
S3
S4
9H
10H
11H
12H
13H
14H
15H
16H
17H
18H
19H
20H
21H
22H
23H
SYNC DL
1/2 HBLK
TP9
RV11 :1/2H BLK WIDTH
IC302 SN74LS164NS
IC31
HCK (+) OUT
HCK (−) OUT
RCK (+) OUT
RCK (−) OUT
1/2 RCK (+) OUT
1/2 RCK (−) OUT
ZERO CK (+) OUT
ZERO CK (−) OUT
101-27C
101-28C
101-27A
101-28A
101-27B
101-28B
101-26B
101-26C
TBC-8/12, 106-6C
TBC-8/12, 106-7C
TBC-8, 106-6A
TBC-8, 106-7A
TBC-8, 106-6B
TBC-8, 106-7B
TBC-8/12, 106-8A
TBC-8/12, 106-8B
TP3
RCK
RV13:C-H BLK WIDTH
IC41 (1/2) SN74LS221NS IC41 (2/2)
H BLK GEN
TP13
C-H BLK
TP14
Y-H BLK
IC42 (1/2) SN74LS221NS IC42 (2/2)
Y BLK GEN
RV14:Y-H BLK WIDTH
302-11A/SY-64, 303-19A
48, 102-17A
L;C BLK OUT
101-17B
EN-48, 102-18B
L;Y BLK OUT
101-18B
VD-18, 103-16B
COLOR FRAME PULSE OUT
101-16C
EN-48, 102-16C
LALT OUT
101-20B
EN-48, 102-20B
Y CLAMP OUT
101-20C
VD-18, 103-16A
C CLAMP OUT
101-21C
EN-48, 102-21C
ADV V SET
1/2
L;V DL OUT
101-25A
TBC-8/12, 106-8C
L;LINE DO OUT/HD OUT
101-23A
TBC-8/12, 106-13A
IC303 SN74LS164NS
IC8 SN74HC74NS (1/2) COLOR FRAME PULSE GEN
IC35 SN74HC86NS (1/4) INVERTER
IC40 (1/2) SN74HC74NS IC25 (1/2) 74F74PC
1/2 RCK 90°SHIFT
IC40 (2/2) SN74HC74NS IC25 (2/2) 74F74PC
ZERO CK 45°SHIFT
IC30 SN74LS164NS
IC34 (3/3) SN74LS11NS
IC31 (1/4) (2/4) (3/4) (4/4) MC10H124M CLOCK DRIVER
IC1 (1/4) (2/4) SN74HC00NS
Y BLK GEN

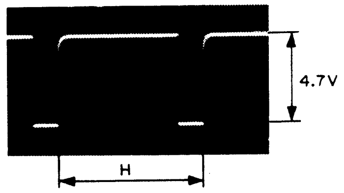
① TP11 PB



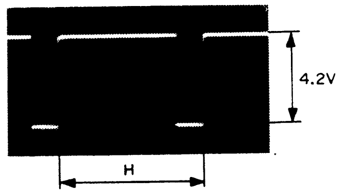
② TP12 PB



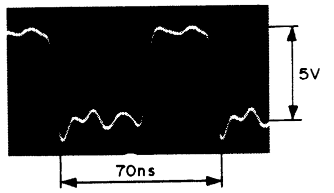
③ TP13 PB



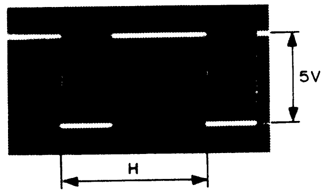
④ TP14 PB



⑤ TP3 PB



⑥ TP9 PB



TBC-9P(2/2)

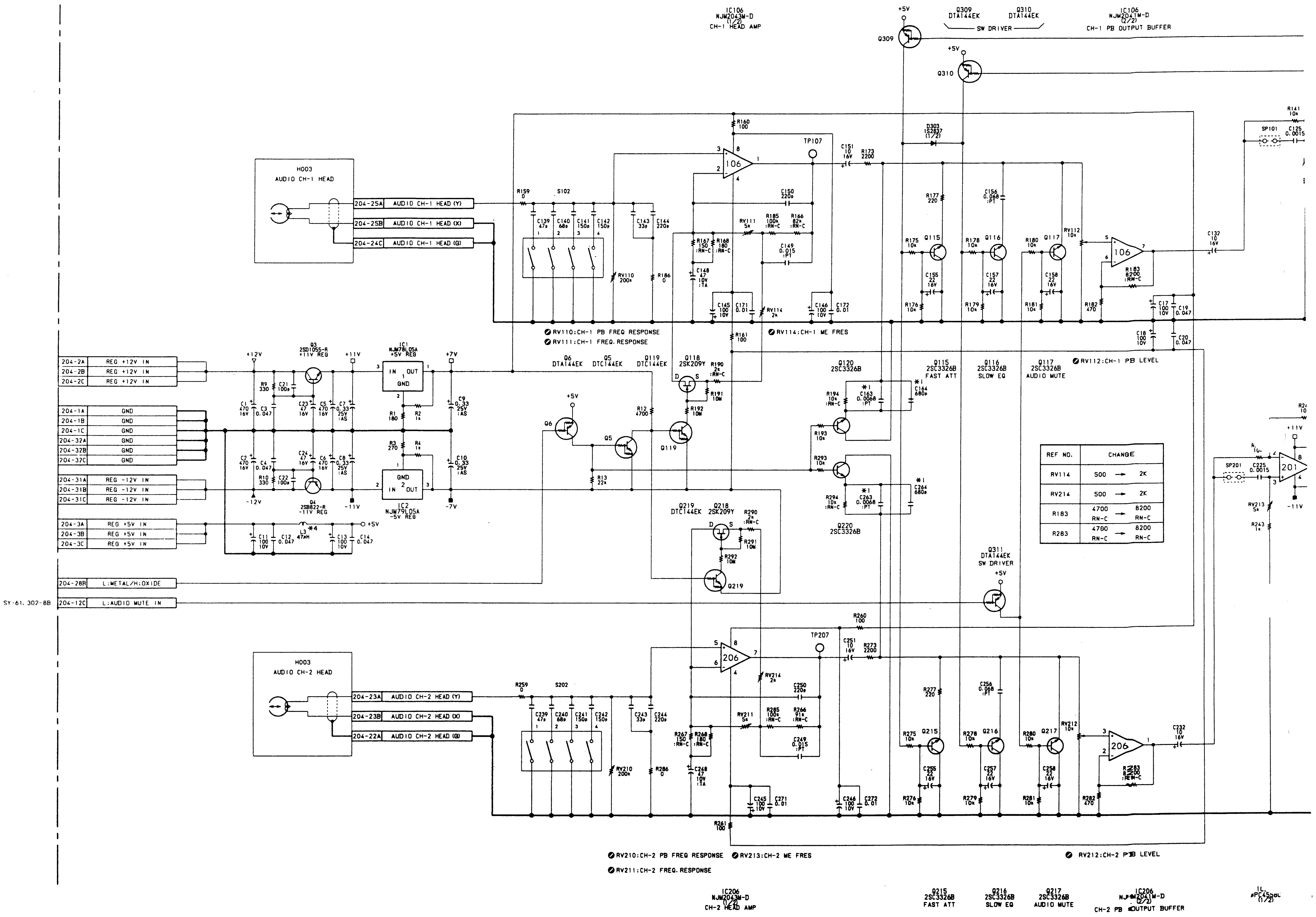
1-622-550-13

BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

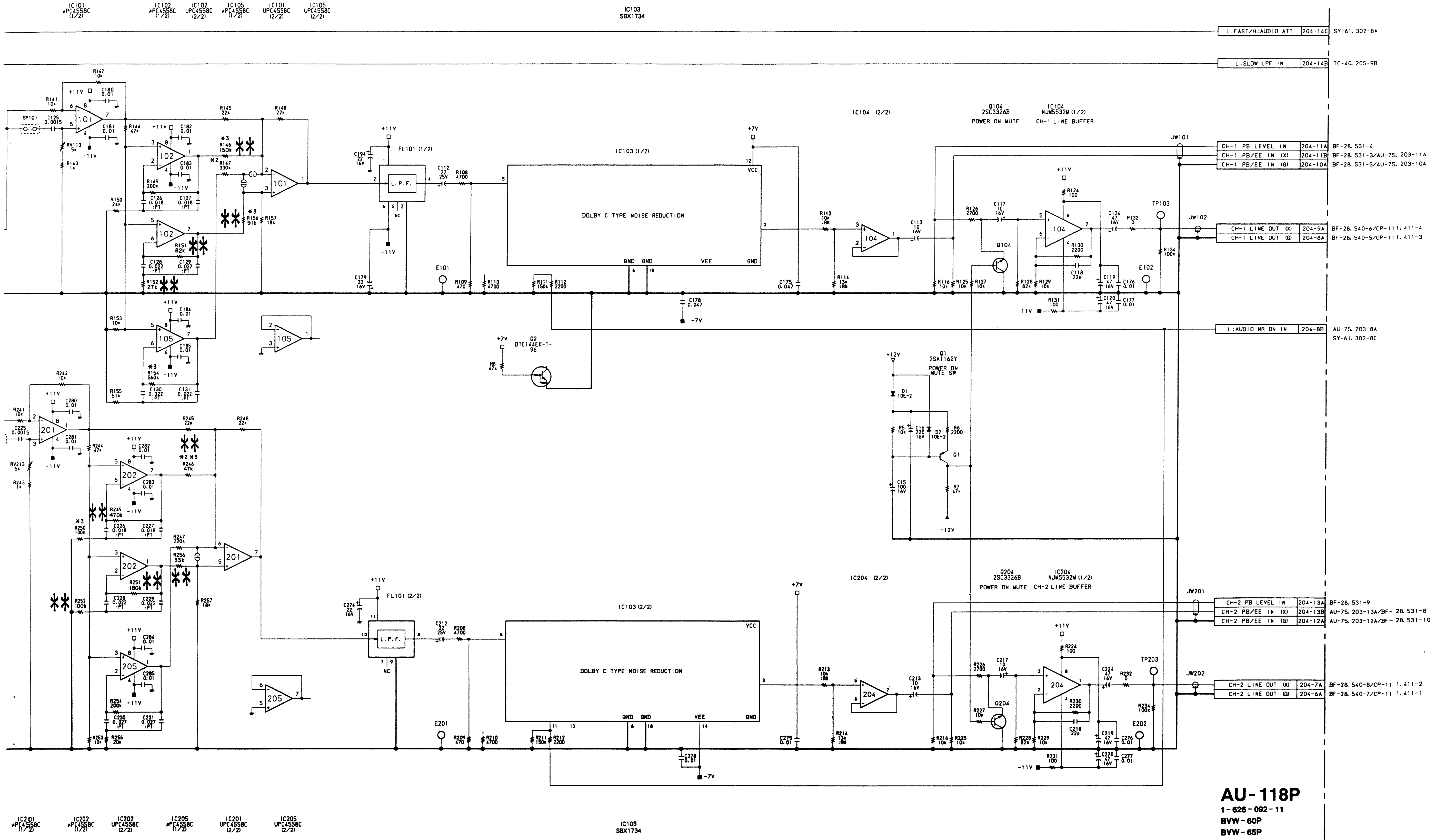
AU-118P; LNG AUDIO HEAD AMPLIFIER

NOTE

MARK	CHANGE INFORMATION	SERIAL NO.
*1	C163 8200pF → 6800pF C263 8200pF → 6800pF C164 680pF ADDED C264 680pF ADDED	S/N 10271 ~
*2	R195 → R147 330k R246 330 → 180k	S/N 10928 ~
*3	R146 62k → 82k R154 330k → 560k R156 120k → 150k R246 180k → 82k R250 DELETED	S/N 11038 ~
*4	L3 45μH → 47μH	S/N 11568 ~


H003 AUDIO CH-1 HEAD
204-25A AUDIO CH-1 HEAD (Y)
204-25B AUDIO CH-1 HEAD (X)
204-24C AUDIO CH-1 HEAD (G)
H003 AUDIO CH-2 HEAD
204-23A AUDIO CH-2 HEAD (Y)
204-23B AUDIO CH-2 HEAD (X)
204-22A AUDIO CH-2 HEAD (G)
204-2A REG +12V IN
204-2B REG +12V IN
204-2C REG +12V IN
204-1A GND
204-1B GND
204-1C GND
204-32A GND
204-32B GND
204-32C GND
204-31A REG -12V IN
204-31B REG -12V IN
204-31C REG -12V IN
204-3A REG +5V IN
204-3B REG +5V IN
204-3C REG +5V IN
204-28B L:METAL/H:OXIDE
SY-61, 302-8B 204-12C L:AUDIO MUTE IN
Q3 2SD1055-R +11V REG
Q4 2SB822-R -11V REG
IC1 NJM78L05A +5V REG
IC2 NJM79L05A -5V REG
L3 47μH *4
IC106 NJM2043M-D (1/2) CH-1 HEAD AMP
IC106 NJM2041M-D (2/2) CH-1 PB OUTPUT BUFFER
Q309 DTA144EK
Q310 DTA144EK
SW DRIVER
D303 1S2837 (1/2)
TP107
S102
RV110:CH-1 PB FREQ RESPONSE
RV111:CH-1 FREQ. RESPONSE
RV114:CH-1 ME FRES
RV112:CH-1 PB LEVEL
Q6 DTA144EK
Q5 DTC144EK
Q119 DTC144EK
Q118 2SK209Y
Q120 2SC3326B
Q115 2SC3326B FAST ATT
Q116 2SC3326B SLOW EQ
Q117 2SC3326B AUDIO MUTE
Q219 DTC144EK
Q218 2SK209Y
Q220 2SC3326B
Q311 DTA144EK SW DRIVER
SP101
SP201
TP207
S202
RV210:CH-2 PB FREQ RESPONSE
RV211:CH-2 FREQ. RESPONSE
RV213:CH-2 ME FRES
RV212:CH-2 PB LEVEL
IC206 NJM2043M-D (1/2) CH-2 HEAD AMP
Q215 2SC3326B FAST ATT
Q216 2SC3326B SLOW EQ
Q217 2SC3326B AUDIO MUTE
IC206 NJM2041M-D (2/2) CH-2 PB OUTPUT BUFFER

REF NO.	CHANGE
RV114	500 → 2K
RV214	500 → 2K
R183	4700 RN-C → 8200 RN-C
R283	4700 RN-C → 8200 RN-C


IC101 μPC4558C (1/2)
IC102 μPC4558C (1/2)
IC102 UPC4558C (2/2)
IC105 μPC4558C (1/2)
IC101 UPC4558C (2/2)
IC105 UPC4558C (2/2)
IC103 SBX1734
L:FAST/H:AUDIO ATT
204-14C
SY-61. 302-8A
L:SLOW LPF IN
204-14B
TC-40. 205-9B
SP101
RV113 5k
RV213 5k
FL101 (1/2)
FL101 (2/2)
L.P.F.
NC
IC103 (1/2)
IC103 (2/2)
DOLBY C TYPE NOISE REDUCTION
VCC
GND
VEE
+7V
-7V
+11V
-11V
+12V
-12V
E101
E102
E201
E202
TP103
TP203
IC104 (2/2)
Q104 2SC3326B
POWER ON MUTE
IC104 NJM5532M (1/2)
CH-1 LINE BUFFER
IC204 (2/2)
Q204 2SC3326B
IC204 NJM5532M (1/2)
CH-2 LINE BUFFER
Q2 DTC144EK-T-96
Q1 2SA1162Y
POWER ON MUTE SW
D1 10E-2
D2 10E-2
JW101
JW102
JW201
JW202
CH-1 PB LEVEL IN
204-11A
BF-28. 531-4
CH-1 PB/EE IN (X)
204-11B
BF-28. 531-3/AU-75. 203-11A
CH-1 PB/EE IN (G)
204-10A
BF-28. 531-5/AU-75. 203-10A
CH-1 LINE OUT (X)
204-9A
BF-28. 540-6/CP-111. 411-4
CH-1 LINE OUT (G)
204-8A
BF-28. 540-5/CP-111. 411-3
L:AUDIO NR ON IN
204-8B
AU-75. 203-8A
SY-61. 302-8C
CH-2 PB LEVEL IN
204-13A
BF-28. 531-9
CH-2 PB/EE IN (X)
204-13B
AU-75. 203-13A/BF- 28. 531-8
CH-2 PB/EE IN (G)
204-12A
AU-75. 203-12A/BF- 28. 531-10
CH-2 LINE OUT (X)
204-7A
BF-28. 540-8/CP-11 1. 411-2
CH-2 LINE OUT (G)
204-6A
BF-28. 540-7/CP-11 1. 411-1
IC201 μPC4558C (1/2)
IC202 μPC4558C (1/2)
IC202 UPC4558C (2/2)
IC205 μPC4558C (1/2)
IC201 UPC4558C (2/2)
IC205 UPC4558C (2/2)
IC103 SBX1734

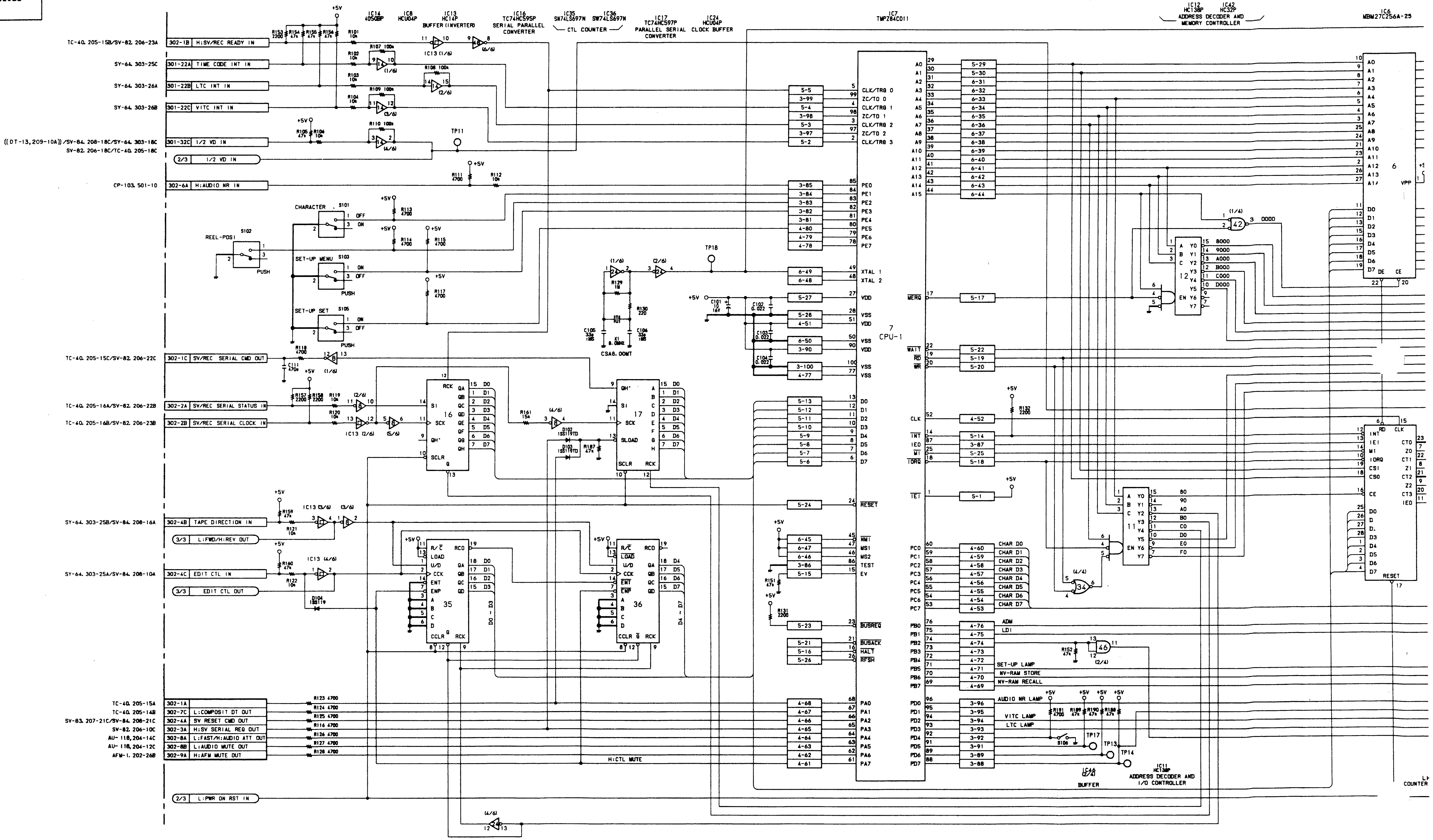
AU-118P
1-626-092-11
BVW-60P
BVW-65P
BVW-95P

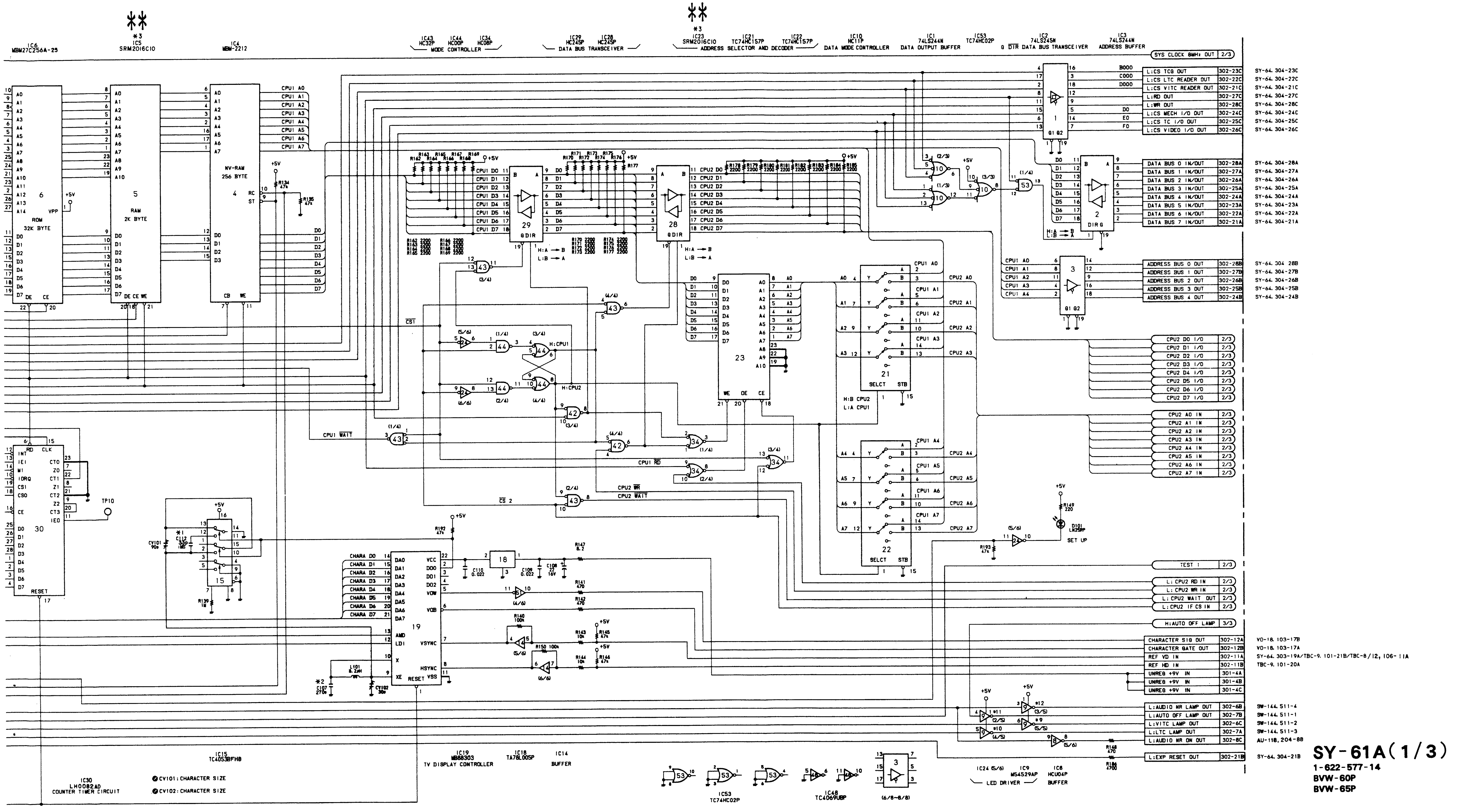
1R13

SY-61A (1/3) ; SYSTEM CONTROL, CPU-1

NOTE

MARK	CHANGE INFORMATION	SERIAL NO.
*1	C112 13pF → 33pF	S/N 10538 ~
*2	C107 560pF → 270pF	S/N 11103 ~
** *3	IC5,23 CXK5816PN-12L → SRM2016C10	S/N 11688 ~


IC14 4050BP
IC8 HCU04P
IC13 HC14P BUFFER (INVERTER)
IC16 TC74HC595P SERIAL PARALLEL CONVERTER
IC35 SN74LS697N
IC36 SN74LS697N
CTL COUNTER
IC17 TC74HC597P PARALLEL SERIAL CONVERTER
IC24 HCU04P CLOCK BUFFER
IC7 TMPZ84C011
IC12 HC138P
IC42 HC32P
ADDRESS DECODER AND MEMORY CONTROLLER
IC6 MBM27C256A-25
302-1B H:SV/REC READY IN
301-22A TIME CODE INT IN
301-22B LTC INT IN
301-22C VITC INT IN
301-32C 1/2 VD IN
2/3 1/2 VD IN
302-6A H:AUDIO NR IN
CHARACTER S101
REEL-POS1 S102
SET-UP MENU S103
SET-UP SET S105
PUSH
302-1C SV/REC SERIAL CMD OUT
302-2A SV/REC SERIAL STATUS IN
302-2B SV/REC SERIAL CLOCK IN
302-4B TAPE DIRECTION IN
3/3 L:FWD/H:REV OUT
302-4C EDIT CTL IN
3/3 EDIT CTL OUT
302-1A
302-7C L:COMPOSIT DT OUT
302-4A SV RESET CMD OUT
302-3A H:SV SERIAL REQ OUT
302-8A L:FAST/H:AUDIO ATT OUT
302-8B L:AUDIO MUTE OUT
302-9A H:AFM MUTE OUT
H:CTL MUTE
2/3 L:PWR ON RST IN
TP11
TP18
CSA6.00MT
7 CPU-1
CHAR D0
CHAR D1
CHAR D2
CHAR D3
CHAR D4
CHAR D5
CHAR D6
CHAR D7
ADM
LD1
SET-UP LAMP
NV-RAM STORE
NV-RAM RECALL
AUDIO NR LAMP
VITC LAMP
LTC LAMP
S106
TP17
TP13
TP14
IC46 (2/4) BUFFER
IC11 HC138P ADDRESS DECODER AND I/O CONTROLLER
COUNTER
16
17
35
36
12
11
6


IC6 MBM27C256A-25
**
*3
IC5 SRM2016C10
IC4 MBM-2212
IC43 HC32P
IC44 HC00P
IC34 HC08P
MODE CONTROLLER
IC29 HC245P
IC28 HC245P
DATA BUS TRANSCEIVER
IC23 SRM2016C10
IC21 TC74HC157P
IC22 TC74HC157P
ADDRESS SELECTOR AND DECODER
IC10 HC11P
DATA MODE CONTROLLER
IC1 74LS244N
DATA OUTPUT BUFFER
IC53 TC74HC02P
IC2 74LS245N
G DIR DATA BUS TRANSCEIVER
IC3 74LS244N
ADDRESS BUFFER
ROM 32K BYTE
RAM 2K BYTE
NV-RAM 256 BYTE
CPU1 A0
CPU1 A1
CPU1 A2
CPU1 A3
CPU1 A4
CPU1 A5
CPU1 A6
CPU1 A7
CPU1 D0
CPU1 D1
CPU1 D2
CPU1 D3
CPU1 D4
CPU1 D5
CPU1 D6
CPU1 D7
CPU2 D0
CPU2 D1
CPU2 D2
CPU2 D3
CPU2 D4
CPU2 D5
CPU2 D6
CPU2 D7
G DIR
H:A → B
L:B → A
H:CPU1
H:CPU2
CS1
CPU1 WAIT
CPU1 RD
CPU2 WR
CPU2 WAIT
CS 2
SELCT
STB
H:B CPU2
L:A CPU1
CPU2 A0
CPU2 A1
CPU2 A2
CPU2 A3
CPU2 A4
CPU2 A5
CPU2 A6
CPU2 A7
DIR G
B000
C000
D000
D0
E0
F0
SYS CLOCK 8MHz OUT 2/3
L:CS TCG OUT 302-23C SY-64, 304-23C
L:CS LTC READER OUT 302-22C SY-64, 304-22C
L:CS VITC READER OUT 302-21C SY-64, 304-21C
L:RD OUT 302-27C SY-64, 304-27C
L:WR OUT 302-28C SY-64, 304-28C
L:CS MECH I/O OUT 302-24C SY-64, 304-24C
L:CS TC I/O OUT 302-25C SY-64, 304-25C
L:CS VIDEO I/O OUT 302-26C SY-64, 304-26C
DATA BUS 0 IN/OUT 302-28A SY-64, 304-28A
DATA BUS 1 IN/OUT 302-27A SY-64, 304-27A
DATA BUS 2 IN/OUT 302-26A SY-64, 304-26A
DATA BUS 3 IN/OUT 302-25A SY-64, 304-25A
DATA BUS 4 IN/OUT 302-24A SY-64, 304-24A
DATA BUS 5 IN/OUT 302-23A SY-64, 304-23A
DATA BUS 6 IN/OUT 302-22A SY-64, 304-22A
DATA BUS 7 IN/OUT 302-21A SY-64, 304-21A
ADDRESS BUS 0 OUT 302-28B SY-64, 304 28B
ADDRESS BUS 1 OUT 302-27B SY-64, 304-27B
ADDRESS BUS 2 OUT 302-26B SY-64, 304-26B
ADDRESS BUS 3 OUT 302-25B SY-64, 304-25B
ADDRESS BUS 4 OUT 302-24B SY-64, 304-24B
CPU2 D0 I/O 2/3
CPU2 D1 I/O 2/3
CPU2 D2 I/O 2/3
CPU2 D3 I/O 2/3
CPU2 D4 I/O 2/3
CPU2 D5 I/O 2/3
CPU2 D6 I/O 2/3
CPU2 D7 I/O 2/3
CPU2 A0 IN 2/3
CPU2 A1 IN 2/3
CPU2 A2 IN 2/3
CPU2 A3 IN 2/3
CPU2 A4 IN 2/3
CPU2 A5 IN 2/3
CPU2 A6 IN 2/3
CPU2 A7 IN 2/3
D101 LN25RP
SET UP
TEST 1 2/3
L; CPU2 RD IN 2/3
L; CPU2 WR IN 2/3
L; CPU2 WAIT OUT 2/3
L; CPU2 IF CS IN 2/3
H:AUTO OFF LAMP 3/3
CHARACTER SIG OUT 302-12A VD-18, 103-17B
CHARACTER GATE OUT 302-12B VD-18, 103-17A
REF VD IN 302-11A SY-64, 303-19A/TBC-9, 101-21B/TBC-8/12, 106-11A
REF HD IN 302-11B TBC-9, 101-20A
UNREG +9V IN 301-4A
UNREG +9V IN 301-4B
UNREG +9V IN 301-4C
L:AUDIO NR LAMP OUT 302-6B SW-144, 511-4
L:AUTO OFF LAMP OUT 302-7B SW-144, 511-1
L:VITC LAMP OUT 302-6C SW-144, 511-2
L:LTC LAMP OUT 302-7A SW-144, 511-3
L:AUDIO NR ON OUT 302-8C AU-118, 204-8B
L:EXP RESET OUT 302-21B SY-64, 304-21B
CHARA D0
CHARA D1
CHARA D2
CHARA D3
CHARA D4
CHARA D5
CHARA D6
CHARA D7
VSYNC
HSYNC
RESET
TP10
IC15 TC4053BFHB
IC30 LH0082AD COUNTER TIMER CIRCUIT
CV101: CHARACTER SIZE
CV102: CHARACTER SIZE
IC19 MB88303 TV DISPLAY CONTROLLER
IC18 TA78L005P
IC14 BUFFER
IC53 TC74HC02P
IC48 TC4069UBP
(6/8~8/8)
IC24 (5/6)
IC9 M54529AP
LED DRIVER
IC8 HCU04P
BUFFER

SY-61A(1/3)
1-622-577-14
BVW-60P
BVW-65P

(( )) ; DT PLAYER ONLY

SY-61A (2/3), (3/3), DUS-570

SY-61A (2/3) ; SYSTEM CONTROL, CPU-2 SERIAL INTERFACE
SY-61A (3/3) ; SYSTEM CONTROL, PARALLEL INTERFACE
**DUS-570 ; FAN MOTOR ERROR DETECTOR

NOTE

MARK	CHANGE INFORMATION	SERIAL NO.
*1	R247 4700 → 0.01	S/N 10456 ~
*2	R247 0.01 DELETED IC39 MBM27C256-25 → MBM27C512-25 32k → 64k VPP → A15 JR201 ADDED	S/N 10538 ~

MARK	CHANGE INFORMATION	SERIAL NO.
*3	CHANGED R285 10k → 33k	S/N 11188 ~
*4	ADDED DUS-570	S/N 11739 ~

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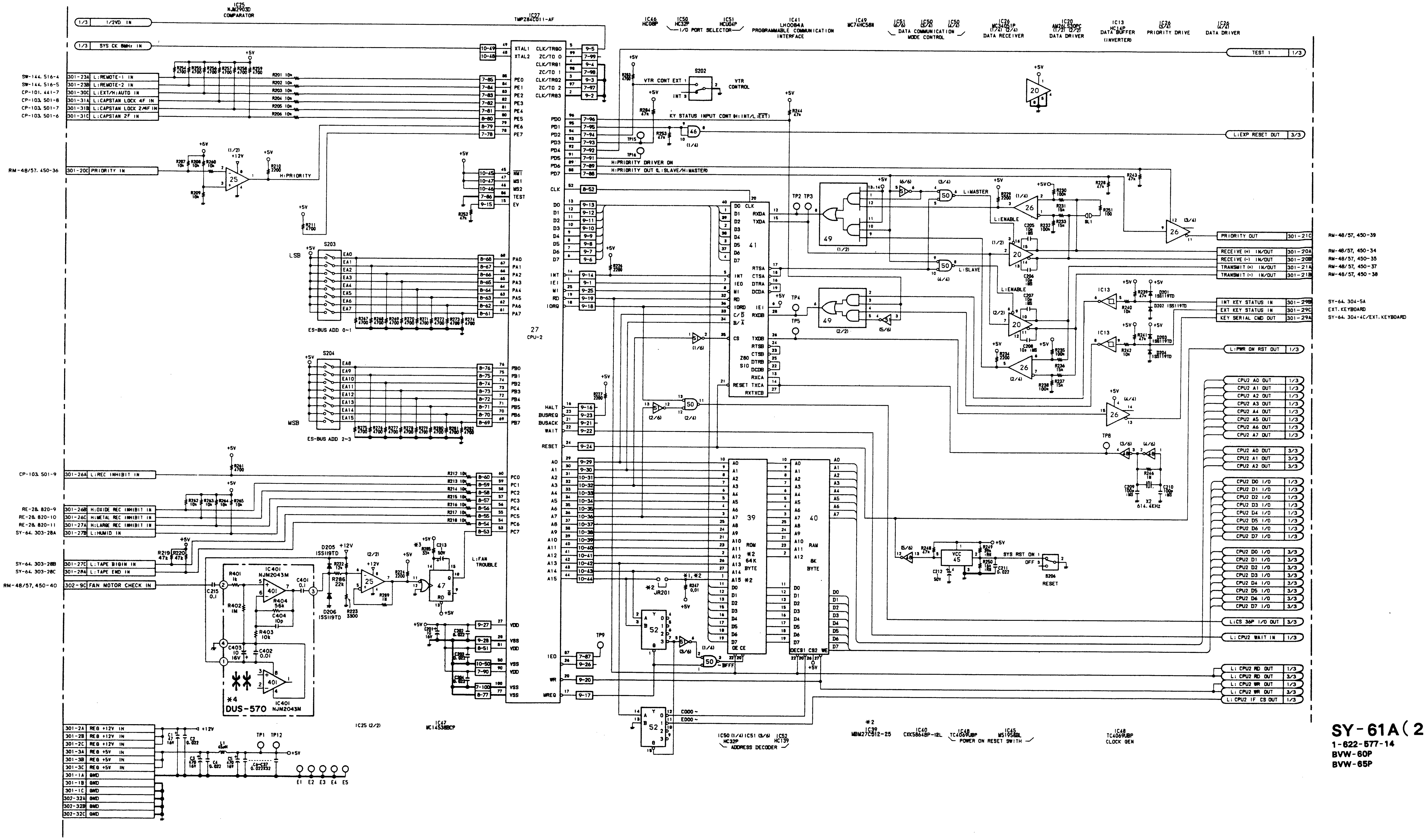
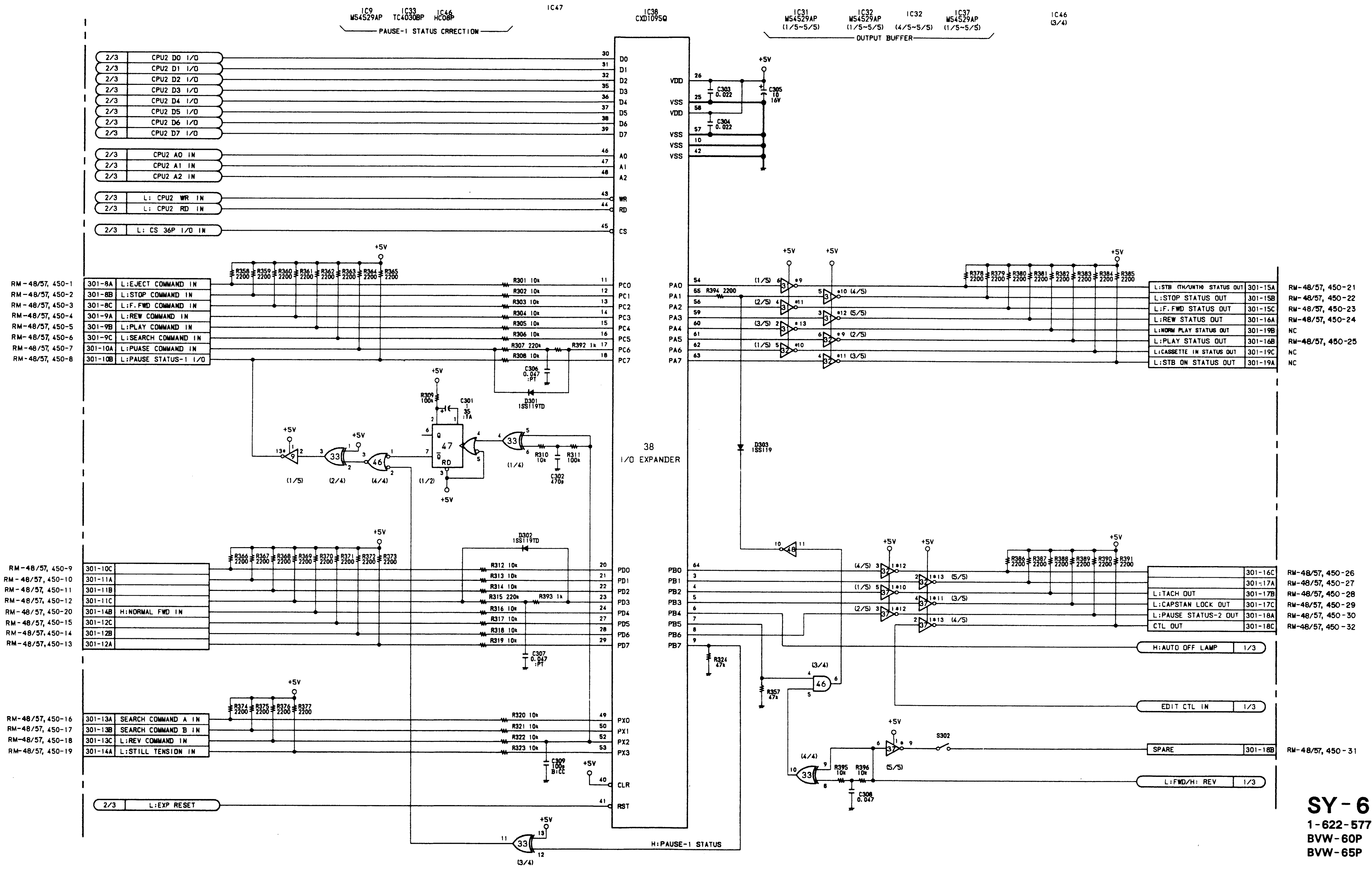

IC25 NJM2903D COMPARATOR
IC27 TMPZ84C011-AF
27 CPU-2
IC46 HC08P
IC50 HC32P
IC51 HC04P
I/O PORT SELECTOR
IC41 LH0084A PROGRAMMABLE COMMUNICATION INTERFACE
IC49 MC74HC58N
DATA COMMUNICATION MODE CONTROL
IC26 MC34051P DATA RECEIVER
IC20 AM26LS30PC DATA DRIVER
IC13 MC14P DATA BUFFER (INVERTER)
PRIORITY DRIVE
DATA DRIVER
1/2VD IN
SYS CK 8MHz IN
L:REMOTE-1 IN
L:REMOTE-2 IN
L:EXT/H:AUTO IN
L:CAPSTAN LOCK 4F IN
L:CAPSTAN LOCK 2/4F IN
L:CAPSTAN 2F IN
PRIORITY IN
H:PRIORITY
S203
S204
LSB
MSB
ES-BUS ADD 0-1
ES-BUS ADD 2-3
L:REC INHIBIT IN
H:OXIDE REC INHIBIT IN
H:METAL REC INHIBIT IN
H:LARGE REC INHIBIT IN
L:HUMID IN
L:TAPE BIGIN IN
L:TAPE END IN
FAN MOTOR CHECK IN
IC401 NJM2043M
L:FAN TROUBLE
DUS-570
S202
VTR CONT EXT
VTR CONTROL
KY STATUS INPUT CONT (H:INT/L:EXT)
H:PRIORITY DRIVER ON
H:PRIORITY OUT (L:SLAVE/H:MASTER)
L:MASTER
L:SLAVE
L:ENABLE
TEST 1
L:EXP RESET OUT
PRIORITY OUT
RECEIVE (+) IN/OUT
RECEIVE (-) IN/OUT
TRANSMIT (+) IN/OUT
TRANSMIT (-) IN/OUT
INT KEY STATUS IN
EXT KEY STATUS IN
KEY SERIAL CMD OUT
L:PWR ON RST OUT
CPU2 A0 OUT
CPU2 A7 OUT
CPU2 D0 I/O
CPU2 D7 I/O
L:CS 36P I/O OUT
L:CPU2 WAIT IN
L:CPU2 RD OUT
L:CPU2 WR OUT
L:CPU2 IF CS OUT
39 ROM 64K BYTE
40 RAM 8K BYTE
JR201
X2 614.4KHz
SYS RST ON OFF
S206 RESET
IC47 MC14538BCP
IC50 (1/4) IC51 (5/6) HC32P IC52 HC139 ADDRESS DECODER
IC39 MBM27C512-25
IC40 CXK5864BP-12L
IC48 TC4069UBP
IC45 M51958BL POWER ON RESET SWITH
IC48 TC4069UBP CLOCK GEN
REG +12V IN
REG +5V IN
GND
TP1 TP12
E1 E2 E3 E4 E5

SY-61A(2/3)
1-622-577-14
BVW-60P
BVW-65P


IC9 M54529AP
IC33 TC4030BP
IC46 HC08P
PAUSE-1 STATUS CRRECTION
IC47
IC38 CXD1095Q
IC31 M54529AP (1/5~5/5)
IC32 M54529AP (1/5~5/5)
IC32 (4/5~5/5)
IC37 M54529AP (1/5~5/5)
OUTPUT BUFFER
IC46 (3/4)
2/3 CPU2 D0 I/O
2/3 CPU2 D1 I/O
2/3 CPU2 D2 I/O
2/3 CPU2 D3 I/O
2/3 CPU2 D4 I/O
2/3 CPU2 D5 I/O
2/3 CPU2 D6 I/O
2/3 CPU2 D7 I/O
2/3 CPU2 A0 IN
2/3 CPU2 A1 IN
2/3 CPU2 A2 IN
2/3 L: CPU2 WR IN
2/3 L: CPU2 RD IN
2/3 L: CS 36P I/O IN
RM-48/57, 450-1 301-8A L:EJECT COMMAND IN
RM-48/57, 450-2 301-8B L:STOP COMMAND IN
RM-48/57, 450-3 301-8C L:F.FWD COMMAND IN
RM-48/57, 450-4 301-9A L:REW COMMAND IN
RM-48/57, 450-5 301-9B L:PLAY COMMAND IN
RM-48/57, 450-6 301-9C L:SEARCH COMMAND IN
RM-48/57, 450-7 301-10A L:PUASE COMMAND IN
RM-48/57, 450-8 301-10B L:PAUSE STATUS-1 I/O
RM-48/57, 450-9 301-10C
RM-48/57, 450-10 301-11A
RM-48/57, 450-11 301-11B
RM-48/57, 450-12 301-11C
RM-48/57, 450-20 301-14B H:NORMAL FWD IN
RM-48/57, 450-15 301-12C
RM-48/57, 450-14 301-12B
RM-48/57, 450-13 301-12A
RM-48/57, 450-16 301-13A SEARCH COMMAND A IN
RM-48/57, 450-17 301-13B SEARCH COMMAND B IN
RM-48/57, 450-18 301-13C L:REV COMMAND IN
RM-48/57, 450-19 301-14A L:STILL TENSION IN
2/3 L:EXP RESET
D0 D1 D2 D3 D4 D5 D6 D7
A0 A1 A2
WR RD CS
PC0 PC1 PC2 PC3 PC4 PC5 PC6 PC7
PD0 PD1 PD2 PD3 PD4 PD5 PD6 PD7
PX0 PX1 PX2 PX3
CLR RST
VDD VSS VDD VSS VSS VSS
PA0 PA1 PA2 PA3 PA4 PA5 PA6 PA7
PB0 PB1 PB2 PB3 PB4 PB5 PB6 PB7
38 I/O EXPANDER
+5V
C303 0.022
C304 0.022
C305 10 16V
R358 2200 R359 2200 R360 2200 R361 2200 R362 2200 R363 2200 R364 2200 R365 2200
R301 10k R302 10k R303 10k R304 10k R305 10k R306 10k R307 220k R308 10k
R392 1k
C306 0.047 :PT
D301 1SS119TD
R309 100k
C301 35 :TA
47 RD
R310 10k
R311 100k
C302 470p
(1/5) (2/4) (4/4) (1/2) (1/4)
D302 1SS119TD
R366 2200 R367 2200 R368 2200 R369 2200 R370 2200 R371 2200 R372 2200 R373 2200
R312 10k R313 10k R314 10k R315 220k R316 10k R317 10k R318 10k R319 10k
R393 1k
C307 0.047 :PT
R374 2200 R375 2200 R376 2200 R377 2200
R320 10k R321 10k R322 10k R323 10k
C309 100p B:CC
(3/4)
H:PAUSE-1 STATUS
R394 2200
R378 2200 R379 2200 R380 2200 R381 2200 R382 2200 R383 2200 R384 2200 R385 2200
L:STB (TH/UNTH) STATUS OUT 301-15A RM-48/57, 450-21
L:STOP STATUS OUT 301-15B RM-48/57, 450-22
L:F.FWD STATUS OUT 301-15C RM-48/57, 450-23
L:REW STATUS OUT 301-16A RM-48/57, 450-24
L:NORM PLAY STATUS OUT 301-19B NC
L:PLAY STATUS OUT 301-16B RM-48/57, 450-25
L:CASSETTE IN STATUS OUT 301-19C NC
L:STB ON STATUS OUT 301-19A NC
D303 1SS119
R386 2200 R387 2200 R388 2200 R389 2200 R390 2200 R391 2200
301-16C RM-48/57, 450-26
301-17A RM-48/57, 450-27
L:TACH OUT 301-17B RM-48/57, 450-28
L:CAPSTAN LOCK OUT 301-17C RM-48/57, 450-29
L:PAUSE STATUS-2 OUT 301-18A RM-48/57, 450-30
CTL OUT 301-18C RM-48/57, 450-32
H:AUTO OFF LAMP 1/3
R324 47k
R357 47k
EDIT CTL IN 1/3
S302
SPARE 301-18B RM-48/57, 450-31
R395 10k R396 10k
C308 0.047
L:FWD/H: REV 1/3

SY-61A (3/3)

1-622-577- 14
BVW-60P
BVW-65P

(2/3)

SY-64AP (2/5); LTC READER

1

NOTE

MARK	CHANGE INFORMATION	SERIAL NO.
*1	DELETED TP10 ~ TP12	S/N 10928 ~
*2	IC49 CXK5816PN-12L → SRM2016C10	S/N 11688 ~

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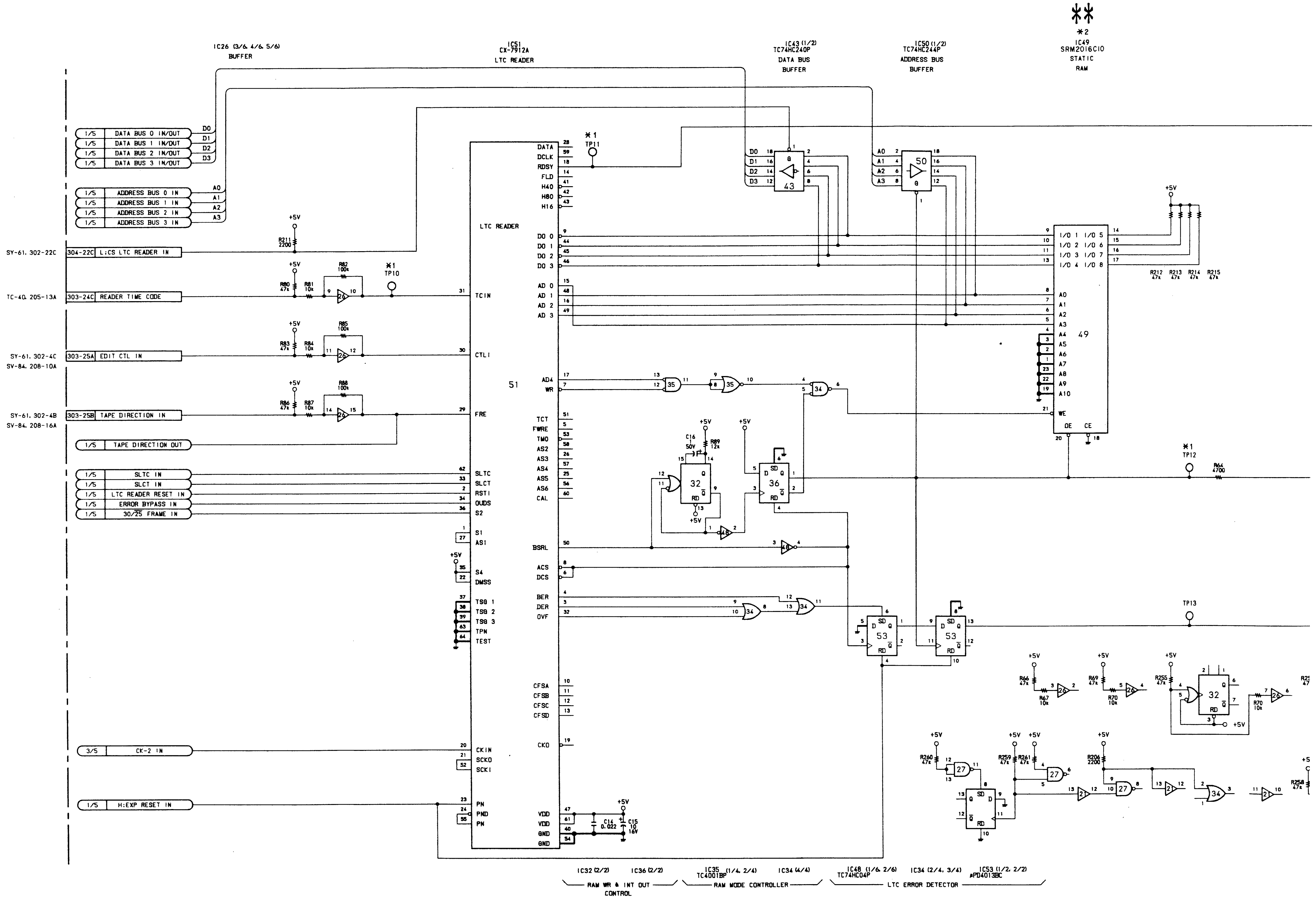
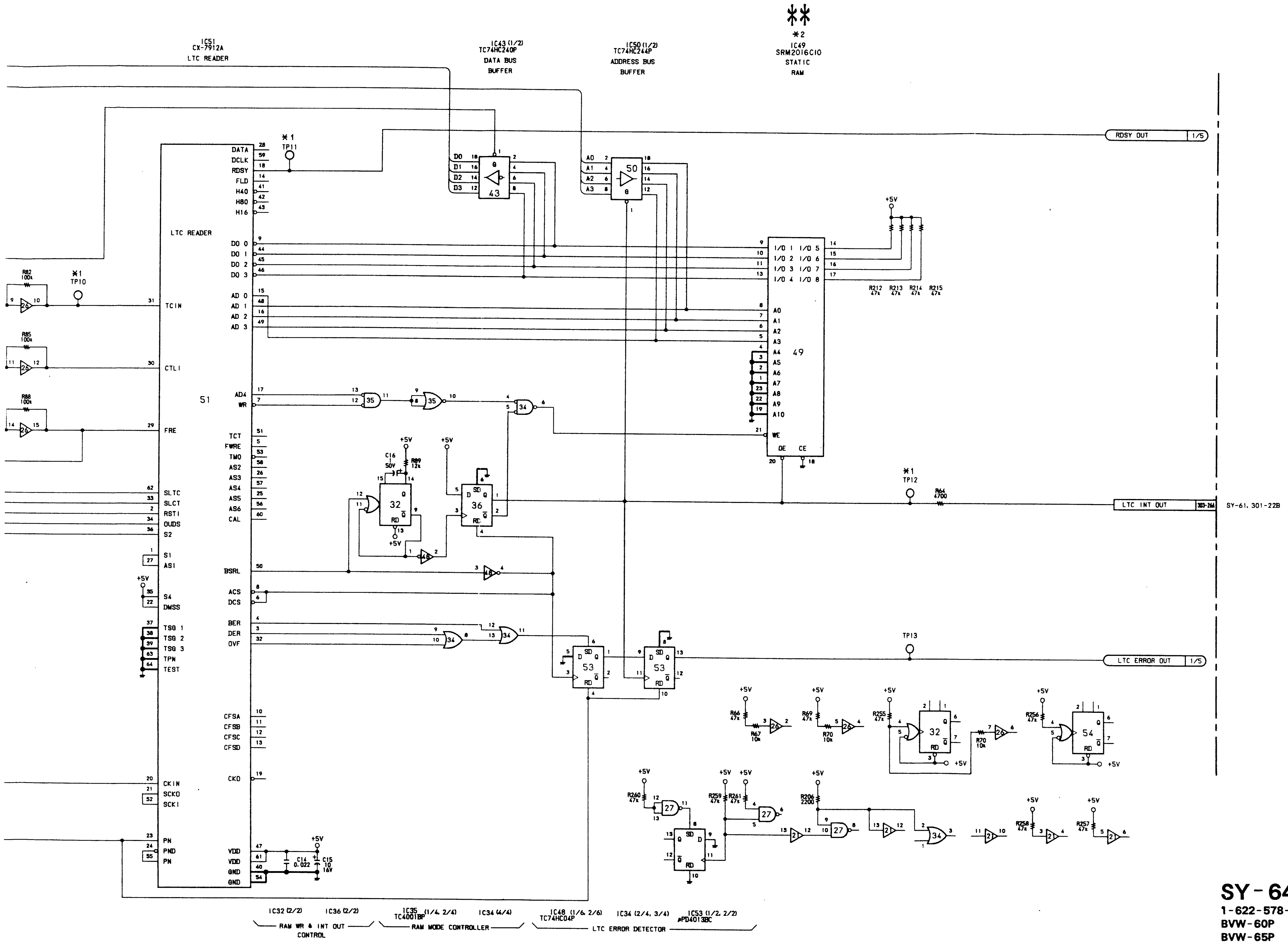

IC26 (3/6, 4/6, 5/6) BUFFER
IC51 CX-7912A LTC READER
IC43 (1/2) TC74HC240P DATA BUS BUFFER
IC50 (1/2) TC74HC244P ADDRESS BUS BUFFER
** *2 IC49 SRM2016C10 STATIC RAM
1/5 DATA BUS 0 IN/OUT
1/5 DATA BUS 1 IN/OUT
1/5 DATA BUS 2 IN/OUT
1/5 DATA BUS 3 IN/OUT
1/5 ADDRESS BUS 0 IN
1/5 ADDRESS BUS 1 IN
1/5 ADDRESS BUS 2 IN
1/5 ADDRESS BUS 3 IN
SY-61, 302-22C 304-22C L:CS LTC READER IN
TC-40, 205-13A 303-24C READER TIME CODE
SY-61, 302-4C SV-84, 208-10A 303-25A EDIT CTL IN
SY-61, 302-4B SV-84, 208-16A 303-25B TAPE DIRECTION IN
1/5 TAPE DIRECTION OUT
1/5 SLTC IN
1/5 SLCT IN
1/5 LTC READER RESET IN
1/5 ERROR BYPASS IN
1/5 30/25 FRAME IN
3/5 CK-2 IN
1/5 H:EXP RESET IN
*1 TP10
*1 TP11
*1 TP12
TP13
LTC READER
DATA DCLK RDSY FLD H40 H80 H16
DO 0 DO 1 DO 2 DO 3
AD 0 AD 1 AD 2 AD 3
TCIN CTLI FRE
AD4 WR
SLTC SLCT RSTI OUDS S2 S1 AS1 S4 DMSS TSG 1 TSG 2 TSG 3 TPN TEST
TCT FWRE TMO AS2 AS3 AS4 AS5 AS6 CAL
BSRL ACS DCS BER DER OVF
CFSA CFSB CFSC CFSD CKO
CKIN SCKO SCKI PN PND PN
VDD VDD GND GND
51
43
50
49
I/O 1 I/O 2 I/O 3 I/O 4 I/O 5 I/O 6 I/O 7 I/O 8
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 WE OE CE
R211 2200
R80 47k R81 10k R82 100k
R83 47k R84 10k R85 100k
R86 47k R87 10k R88 100k
R212 47k R213 47k R214 47k R215 47k
C16 50V R89 12k
C14 0.022 C15 10 16V
R64 4700
R66 47k R67 10k R69 47k R70 10k R255 47k R70 10k
R260 47k R259 47k R261 47k R206 2200 R258 47k
+5V
IC32 (2/2) IC36 (2/2) RAM WR & INT OUT CONTROL
IC35 (1/4, 2/4) TC4001BP IC34 (4/4) RAM MODE CONTROLLER
IC48 (1/6, 2/6) TC74HC04P IC34 (2/4, 3/4) IC53 (1/2, 2/2) μPD4013BC LTC ERROR DETECTOR

A B C D E F G H


IC51
CX-7912A
LTC READER
IC43 (1/2)
TC74HC240P
DATA BUS
BUFFER
IC50 (1/2)
TC74HC244P
ADDRESS BUS
BUFFER
*2
IC49
SRM2016C10
STATIC
RAM
RDSY OUT
1/5
LTC INT OUT
SY-61, 301-22B
LTC ERROR OUT
1/5
TP10
TP11
TP12
TP13
R64
4700
R212 47k
R213 47k
R214 47k
R215 47k
+5V
LTC READER
DATA
DCLK
RDSY
FLD
H40
H80
H16
DO 0
DO 1
DO 2
DO 3
AD 0
AD 1
AD 2
AD 3
AD4
WR
TCIN
CTLI
FRE
51
TCT
FWRE
TMO
AS2
AS3
AS4
AS5
AS6
CAL
SLTC
SLCT
RST1
OUDS
S2
S1
AS1
S4
DWSS
TSG 1
TSG 2
TSG 3
TPN
TEST
BSRL
ACS
DCS
BER
DER
OVF
CFSA
CFSB
CFSC
CFSD
CKO
CKIN
SCKO
SCKI
PN
PND
PN
VDD
VDD
GND
GND
C14
0.022
C15
10
16V
C16
50V
R89
12k
R82
100k
R85
100k
R88
100k
I/O 1 I/O 5
I/O 2 I/O 6
I/O 3 I/O 7
I/O 4 I/O 8
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
WE
OE
CE
49
43
50
35
34
32
36
48
53
27
26
21
54
R66 47k
R67 10k
R69 47k
R70 10k
R255 47k
R256 47k
R260 47k
R259 47k
R261 47k
R206 2200
R258 47k
R257 47k
IC32 (2/2)
IC36 (2/2)
RAM WR & INT OUT
CONTROL
IC35 (1/4, 2/4)
TC4001BP
IC34 (4/4)
RAM MODE CONTROLLER
IC48 (1/6, 2/6)
TC74HC04P
IC34 (2/4, 3/4)
IC53 (1/2, 2/2)
μPD4013BC
LTC ERROR DETECTOR

SY-64AP(2/5)

1-622-578-21
BVW-60P
BVW-65P
BVW-95P

SY-64AP (3/5); VITC READER

1

NOTE

	MARK	CHANGE INFORMATION	SERIAL NO.
	*1	R245 62k → 75k	S/N 10803 ~
	*2	TP17 DELETED	S/N 10928 ~
	*3	JR1 → R412 0.01 JR3 → R413 0.01	S/N 11153 ~
**	*4	IC42 CXK5816PN-12L → SRM2016C10	S/N 11688 ~

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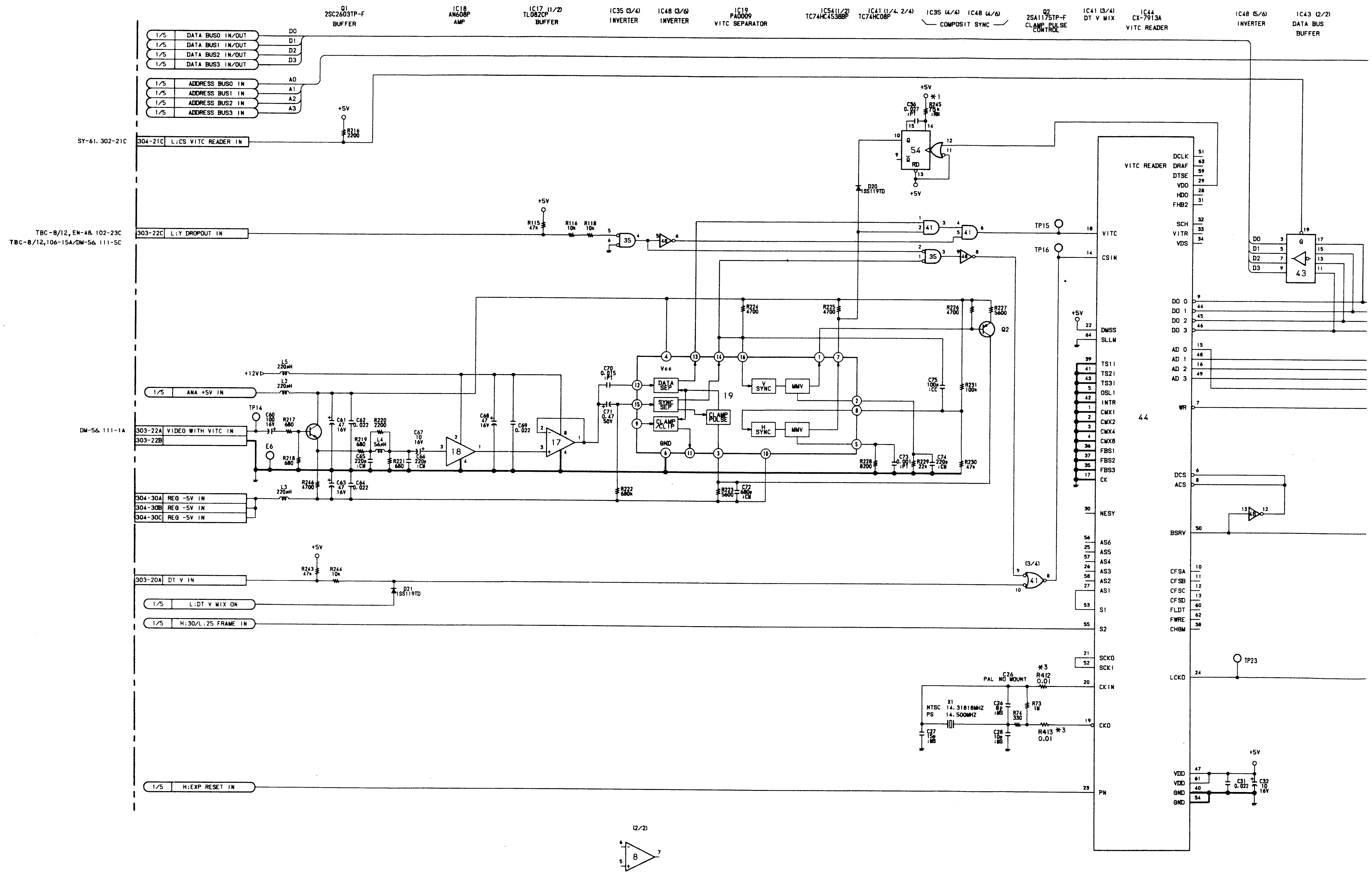
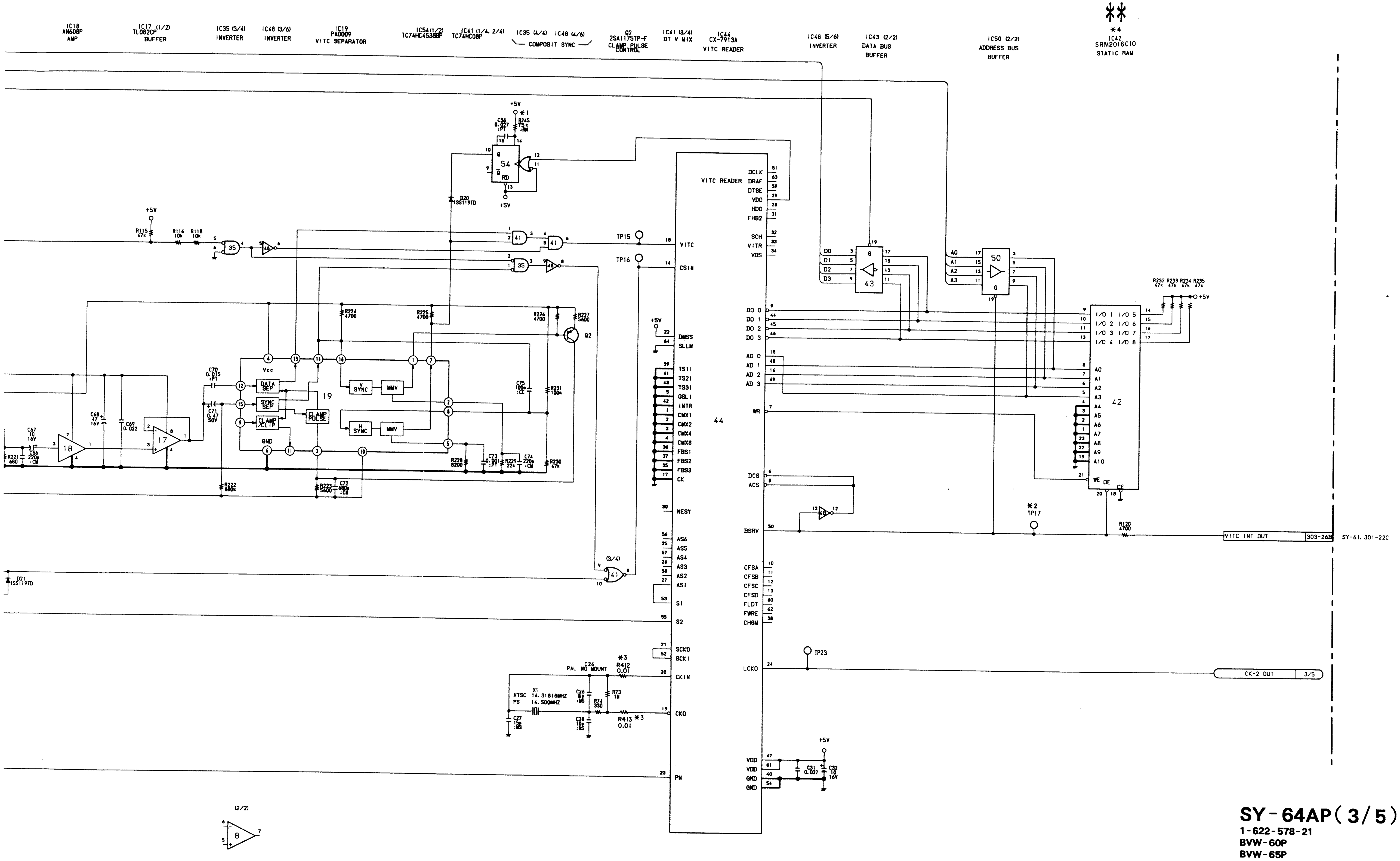

Q1
2SC2603TP-F
BUFFER
IC18
AN608P
AMP
IC17 (1/2)
TL082CP
BUFFER
IC35 (3/4)
INVERTER
IC48 (3/6)
INVERTER
IC19
PA0009
VITC SEPARATOR
IC54(1/2)
TC74HC4538BP
IC41 (1/4, 2/4)
TC74HC08P
IC35 (4/4) IC48 (4/6)
COMPOSIT SYNC
Q2
2SA1175TP-F
CLAMP PULSE CONTROL
IC41 (3/4)
DT V MIX
IC44
CX-7913A
VITC READER
IC48 (5/6)
INVERTER
IC43 (2/2)
DATA BUS BUFFER
1/5 DATA BUS0 IN/OUT
1/5 DATA BUS1 IN/OUT
1/5 DATA BUS2 IN/OUT
1/5 DATA BUS3 IN/OUT
D0
D1
D2
D3
1/5 ADDRESS BUS0 IN
1/5 ADDRESS BUS1 IN
1/5 ADDRESS BUS2 IN
1/5 ADDRESS BUS3 IN
A0
A1
A2
A3
SY-61, 302-21C
304-21C L:CS VITC READER IN
TBC-8/12, EN-48, 102-23C
TBC-8/12, 106-15A/DM-56, 111-5C
303-22C L:Y DROPOUT IN
+12V
L5 220μH
1/5 ANA +5V IN
L2 220μH
TP14
DM-56, 111-1A
303-22A VIDEO WITH VITC IN
303-22B
E6
C60 100 16V
R217 680
R218 680
C61 47 16V
C62 0.022
R220 2200
R219 680
L4 56μH
C65 220p :CM
R221 680
C67 10 16V
C66 220p :CM
R246 4700
C63 47 16V
C64 0.022
L3 220μH
304-30A REG -5V IN
304-30B REG -5V IN
304-30C REG -5V IN
18
17
C68 47 16V
C69 0.022
C70 0.015 :PT
C71 0.47 50V
R222 680k
DATA SEP
SYNC SEP
CLAMP /CLIP
CLAMP PULSE
V SYNC
H SYNC
MMV
19
Vcc
GND
R223 5600
C72 680p :CM
R224 4700
R225 4700
R226 4700
R227 5600
Q2
C75 100p :CC
R231 100k
R228 8200
C73 0.001 :PT
R229 22k
C74 220p :CM
R230 47k
+5V
R115 47k
R116 10k
R118 10k
35
48
41
TP15
TP16
+5V
*1
C56 0.027 :PT
R245 75k
54
RD
D20 1SS119TD
+5V
R216 2200
+5V
R243 47k
R244 10k
303-20A DT V IN
D21 1SS119TD
1/5 L:DT V MIX ON
1/5 H:30/L:25 FRAME IN
(3/4)
41
1/5 H:EXP RESET IN
PAL NO MOUNT
C26
*3
R412 0.01
X1
NTSC 14.31818MHZ
PS 14.500MHZ
C26 8p :MS
R73 1M
R74 330
C27 15p :MS
C28 10p :MS
R413 *3 0.01
VITC READER
44
VITC
CSIN
DMSS
SLLM
TS1I
TS2I
TS3I
OSL1
INTR
CMX1
CMX2
CMX4
CMX8
FBS1
FBS2
FBS3
CK
NESY
AS6
AS5
AS4
AS3
AS2
AS1
S1
S2
SCKO
SCKI
CKIN
CKO
PN
DCLK
DRAF
DTSE
VDO
HDO
FHB2
SCH
VITR
VDS
DO 0
DO 1
DO 2
DO 3
AD 0
AD 1
AD 2
AD 3
WR
DCS
ACS
BSRV
CFSA
CFSB
CFSC
CFSD
FLDT
FWRE
CHGM
LCKO
TP23
VDD
VDD
GND
GND
+5V
C31 0.022
C32 10 16V
G
43
(2/2)
8


IC18 AN608P AMP
IC17 (1/2) TL082CP BUFFER
IC35 (3/4) INVERTER
IC48 (3/6) INVERTER
IC19 PA0009 VITC SEPARATOR
IC54(1/2) TC74HC4538BP
IC41 (1/4, 2/4) TC74HC08P
IC35 (4/4) IC48 (4/6) COMPOSIT SYNC
Q2 2SA1175TP-F CLAMP PULSE CONTROL
IC41 (3/4) DT V MIX
IC44 CX-7913A VITC READER
IC48 (5/6) INVERTER
IC43 (2/2) DATA BUS BUFFER
IC50 (2/2) ADDRESS BUS BUFFER
**
*4 IC42 SRM2016C10 STATIC RAM
+5V
*1
C36 0.047
R245 75k
54
RD
D20 1SS119TD
R115 47k
R116 10k
R118 10k
35
48
41
TP15
TP16
VITC
CSIN
R224 4700
R225 4700
R226 4700
R227 5600
Q2
C70 0.015
C71 0.47 50V
DATA SEP
SYNC SEP
CLAMP CLIP
CLAMP PULSE
V SYNC
H SYNC
MMV
Vcc
GND
19
C75 100p
R231 100k
C68 47 16V
C69 0.022
C67 10 16V
C66 220p
R221 680
18
17
R222 680k
R223 5600
C72 680p
R228 8200
C73 0.001
R229 22k
C74 220p
R230 47k
D21 1SS119TD
(3/4) 41
(2/2) 8
44
VITC READER
DCLK
DRAF
DTSE
VDO
HDO
FHB2
SCH
VITR
VDS
DMSS
SLLM
TS11
TS21
TS31
OSL1
INTR
CMX1
CMX2
CMX4
CMX8
FBS1
FBS2
FBS3
CK
NESY
AS6
AS5
AS4
AS3
AS2
AS1
S1
S2
SCKO
SCKI
CKIN
CKO
PN
DO 0
DO 1
DO 2
DO 3
AD 0
AD 1
AD 2
AD 3
WR
DCS
ACS
BSRV
CFSA
CFSB
CFSC
CFSD
FLDT
FWRE
CHBM
LCKO
VDD
GND
C26 PAL NO MOUNT
*3 R412 0.01
R413 *3 0.01
X1 NTSC 14.31818MHZ PS 14.500MHZ
C27 15p
C28 10p
R74 330
R73 1M
C31 0.022
C32 10 16V
TP23
D0 D1 D2 D3
G
43
A0 A1 A2 A3
50
R232 R233 R234 R235 47k
I/O 1 I/O 2 I/O 3 I/O 4 I/O 5 I/O 6 I/O 7 I/O 8
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10
WE OE CE
42
*2 TP17
R120 4700
VITC INT OUT
303-26B
SY-61, 301-22C
CK-2 OUT
3/5

SY-64AP(3/5)
1-622-578-21
BVW-60P
BVW-65P
BVW-95P

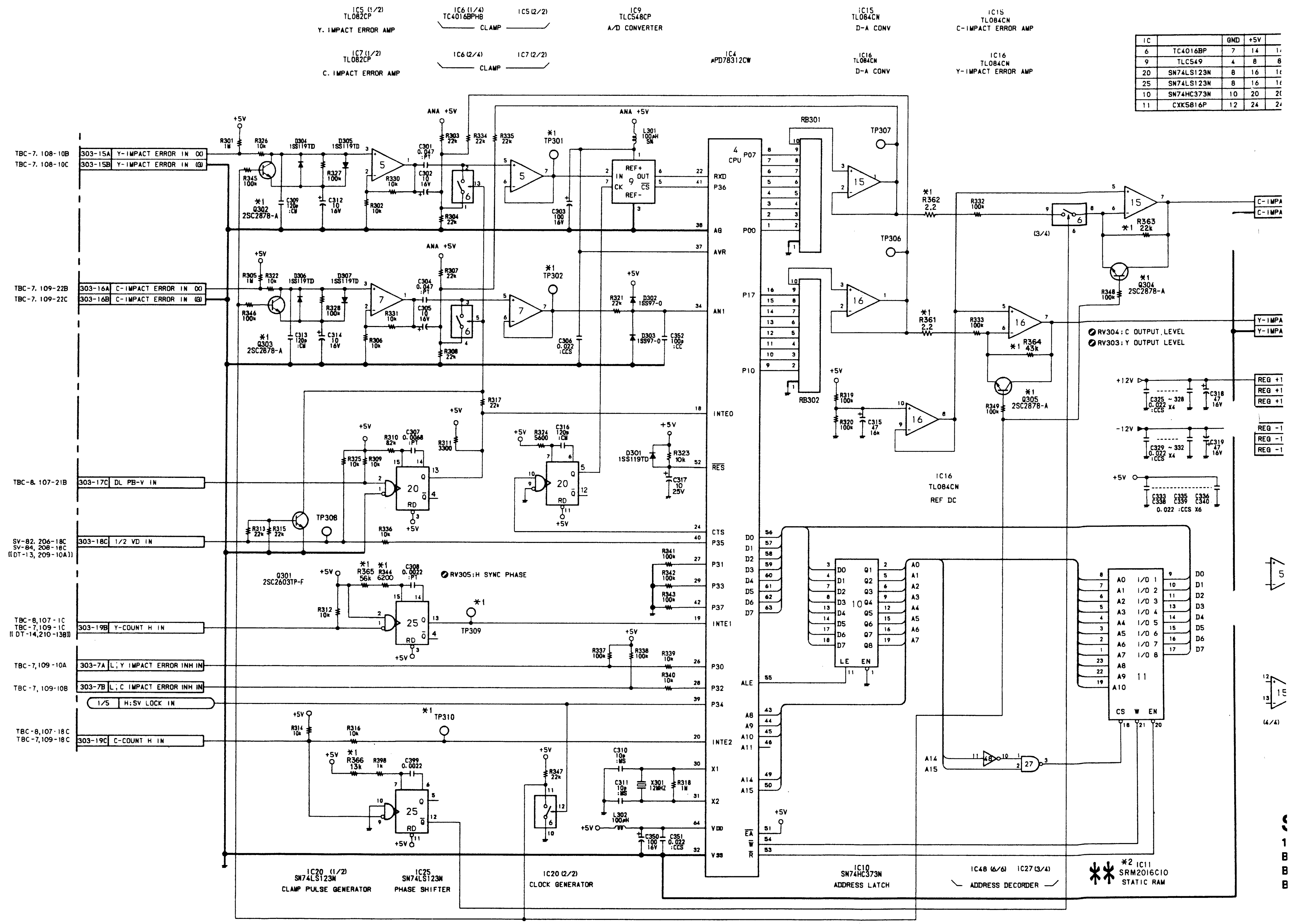
SY-64AP (4/5), (5/5)

SY-64AP (4/5) ; TIME BASE IMPACT ERROR CORRECTOR
SY-64AP (5/5) ; SENSOR AMPLIFIER

1

NOTE

	MARK	CHANGE INFORMATION	SERIAL NO.
	*1	DELETED Q302, Q303, Q304, Q305 TP301, TP302, TP309, TP310 TP401, E401 R344 1k → 6200 RV303 100k → R364 43k RV304 100k → R363 22k RV305 100k → R365 56k RV399 100k → R366 13k S301 → R361 2.2 S302 → R362 2.2	S/N 10928 ~
✱✱	*2	IC11 CXK5816PN-12L → SRM2016C10	S/N 11688 ~


IC5 (1/2) TL082CP
Y. IMPACT ERROR AMP
IC7 (1/2) TL082CP
C. IMPACT ERROR AMP
IC6 (1/4) TC4016BPHB
IC5 (2/2)
CLAMP
IC6 (2/4)
IC7 (2/2)
CLAMP
IC9 TLC548CP
A/D CONVERTER
IC4 μPD78312CW
IC15 TL084CN
D-A CONV
IC16 TL084CN
D-A CONV
IC15 TL084CN
C-IMPACT ERROR AMP
IC16 TL084CN
Y-IMPACT ERROR AMP
TBC-7, 108-10B
TBC-7, 108-10C
303-15A Y-IMPACT ERROR IN (X)
303-15B Y-IMPACT ERROR IN (G)
TBC-7, 109-22B
TBC-7, 109-22C
303-16A C-IMPACT ERROR IN (X)
303-16B C-IMPACT ERROR IN (G)
TBC-8, 107-21B
303-17C DL PB-V IN
SV-82, 206-18C
SV-84, 208-18C
[(DT-13, 209-10A)]
303-18C 1/2 VD IN
TBC-8,107-1C
TBC-7,109-1C
[(DT-14,210-13B)]
303-19B Y-COUNT H IN
TBC-7,109-10A
303-7A L; Y IMPACT ERROR INH IN
TBC-7, 109-10B
303-7B L; C IMPACT ERROR INH IN
1/5 H; SV LOCK IN
TBC-8,107-18C
TBC-7,109-18C
303-19C C-COUNT H IN
+5V
ANA +5V
R301 1M
R326 10k
D304 1SS119TD
D305 1SS119TD
R345 100k
R327 100k
*1 Q302 2SC2878-A
C309 120p :CM
C312 10 16V
R330 10k
R302 10k
C301 0.047 :PT
C302 10 16V
R303 22k
R334 22k
R335 22k
R304 22k
*1 TP301
C303 100 16V
R305 1M
R322 10k
D306 1SS119TD
D307 1SS119TD
R346 100k
R328 100k
*1 Q303 2SC2878-A
C313 120p :CM
C314 10 16V
R331 10k
R306 10k
C304 0.047 :PT
C305 10 16V
R307 22k
R308 22k
*1 TP302
C306 0.022 :CCS
L301 100μH 5%
REF+
IN
OUT
CK
CS
REF-
4 CPU
RXD
P36
AG
AVR
AN1
INTE0
RES
CTS
P35
P31
P33
P37
INTE1
P30
P32
P34
INTE2
X1
X2
VDD
VSS
P07
P00
P17
P10
D0
D1
D2
D3
D4
D5
D6
D7
ALE
A8
A9
A10
A11
A14
A15
EA
W
R
RB301
RB302
TP307
TP306
*1 R362 2.2
R332 100k
*1 R361 2.2
R333 100k
(3/4)
*1 R363 22k
*1 Q304 2SC2878-A
R348 100k
*1 R364 43k
*1 Q305 2SC2878-A
R349 100k
R319 100k
R320 100k
C315 47 16k
IC16 TL084CN
REF DC
RV304 : C OUTPUT LEVEL
RV303 : Y OUTPUT LEVEL
+12V
C325 ~ 328 0.022 :CCS X4
C318 47 16V
-12V
C329 ~ 332 0.022 :CCS X4
C319 47 16V
C333 C335 C336
C338 C339 C340
0.022 :CCS X6
C-IMPA
C-IMPA
Y-IMPA
Y-IMPA
REG +1
REG +1
REG +1
REG -1
REG -1
REG -1
R317 22k
R311 3300
R310 82k
C307 0.0068 :PT
R325 10k
R309 10k
R313 22k
R315 22k
TP308
R336 10k
R324 5600
C316 120p :CM
D301 1SS119TD
R323 10k
C317 10 25V
R321 22k
D302 1SS97-0
D303 1SS97-0
C352 100p :CC
Q301 2SC2603TP-F
*1 R365 56k
*1 R344 6200
C308 0.0022 :PT
RV305 : H SYNC PHASE
R312 10k
*1 TP309
R341 100k
R342 100k
R343 100k
R337 100k
R338 100k
R339 10k
R340 10k
R314 10k
R316 10k
*1 TP310
*1 R366 13k
R398 1k
C399 0.0022
R347 22k
C310 10p :MS
C311 10p :MS
X301 12MHz
R318 1M
L302 100μH
C350 100 16V
C351 0.022 :CCS
IC20 (1/2) SN74LS123N
CLAMP PULSE GENERATOR
IC25 SN74LS123N
PHASE SHIFTER
IC20 (2/2)
CLOCK GENERATOR
IC10 SN74HC373N
ADDRESS LATCH
IC48 (6/6) IC27 (3/4)
ADDRESS DECORDER
✱✱ *2 IC11 SRM2016C10
STATIC RAM
(4/4)

IC		GND	+5V
6	TC4016BP	7	14
9	TLC549	4	8
20	SN74LS123N	8	16
25	SN74LS123N	8	16
10	SN74HC373N	10	20
11	CXK5816P	12	24

2
3
4
5

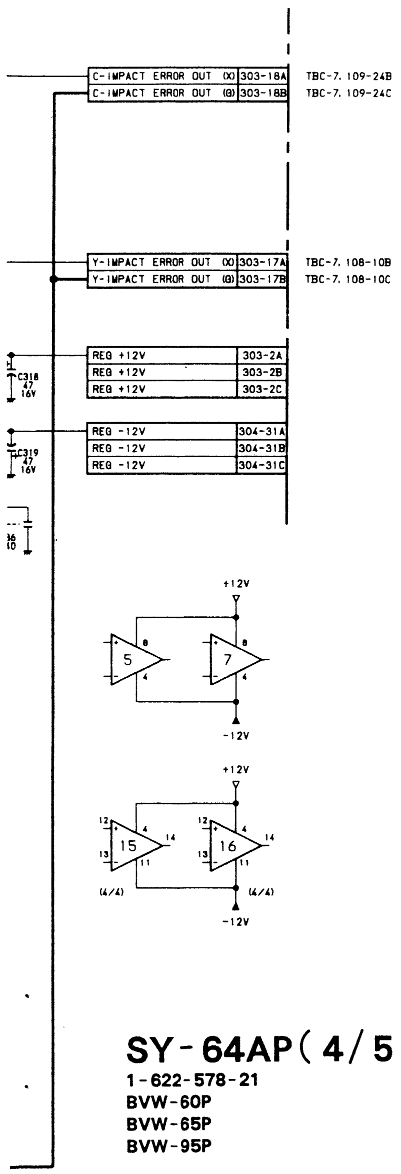
A | B | C | D | E | F | G |

SY-64AP (4/5), (5/5)

NOTE

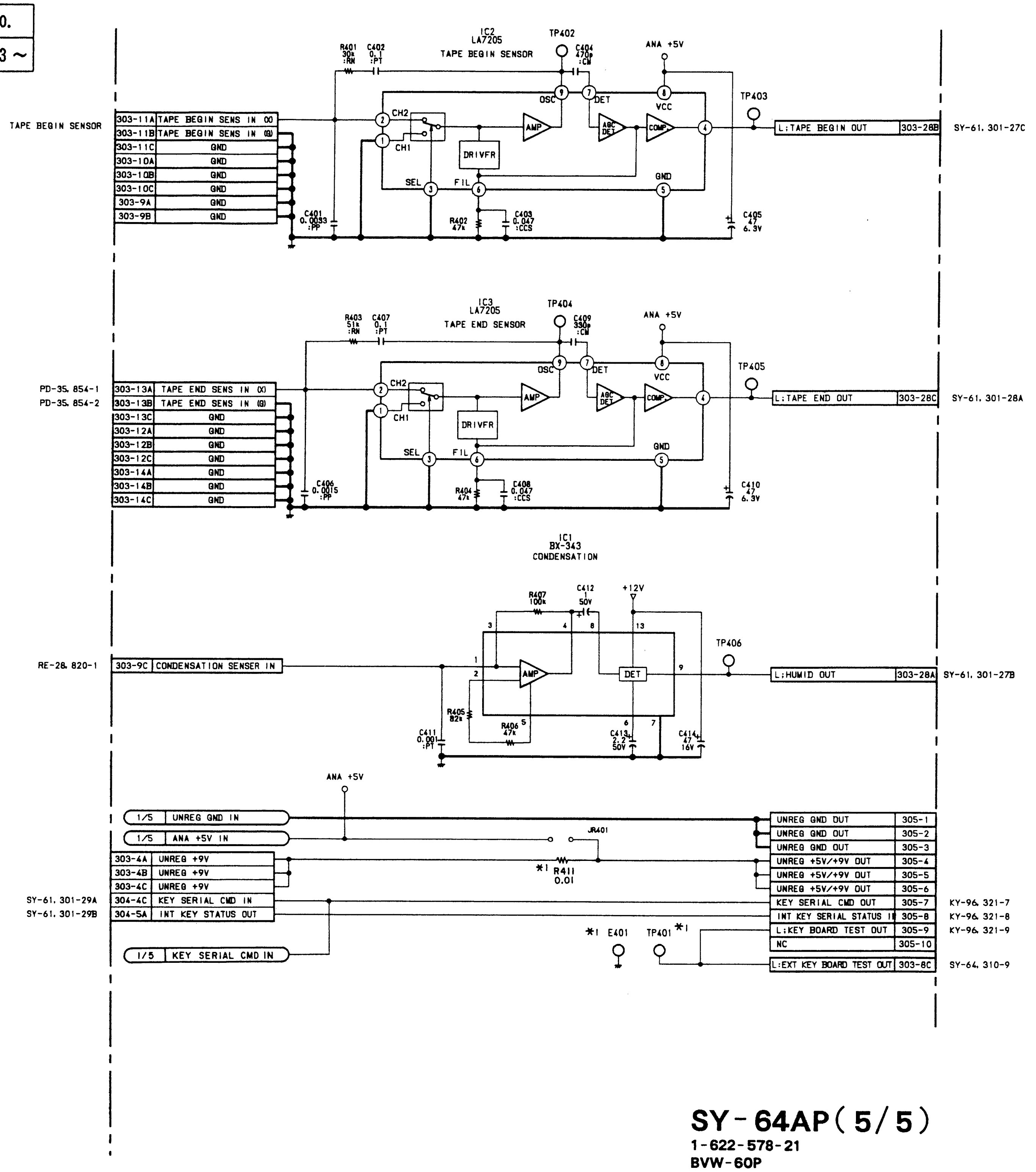
MARK	CHANGE INFORMATION	SERIAL NO.
*1	JR402 → R411 0.01	S/N 11153 ~

	GND	+5V	PACKAGE	
P	7	14	14P	DIP
	4	8	8P	
3N	8	16	16P	
3N	8	16	16P	
3N	10	20	20P	
P	12	24	24P	


C-IMPACT ERROR OUT (X) 303-18A
C-IMPACT ERROR OUT (G) 303-18B
TBC-7, 109-24B
TBC-7, 109-24C
Y-IMPACT ERROR OUT (X) 303-17A
Y-IMPACT ERROR OUT (G) 303-17B
TBC-7, 108-10B
TBC-7, 108-10C
REG +12V 303-2A
REG +12V 303-2B
REG +12V 303-2C
C318 47 16V
REG -12V 304-31A
REG -12V 304-31B
REG -12V 304-31C
C319 47 16V
+12V
5
7
8
4
-12V
+12V
15
16
12
13
4
14
11
(4/4)
(4/4)
-12V

SY-64AP(4/5)

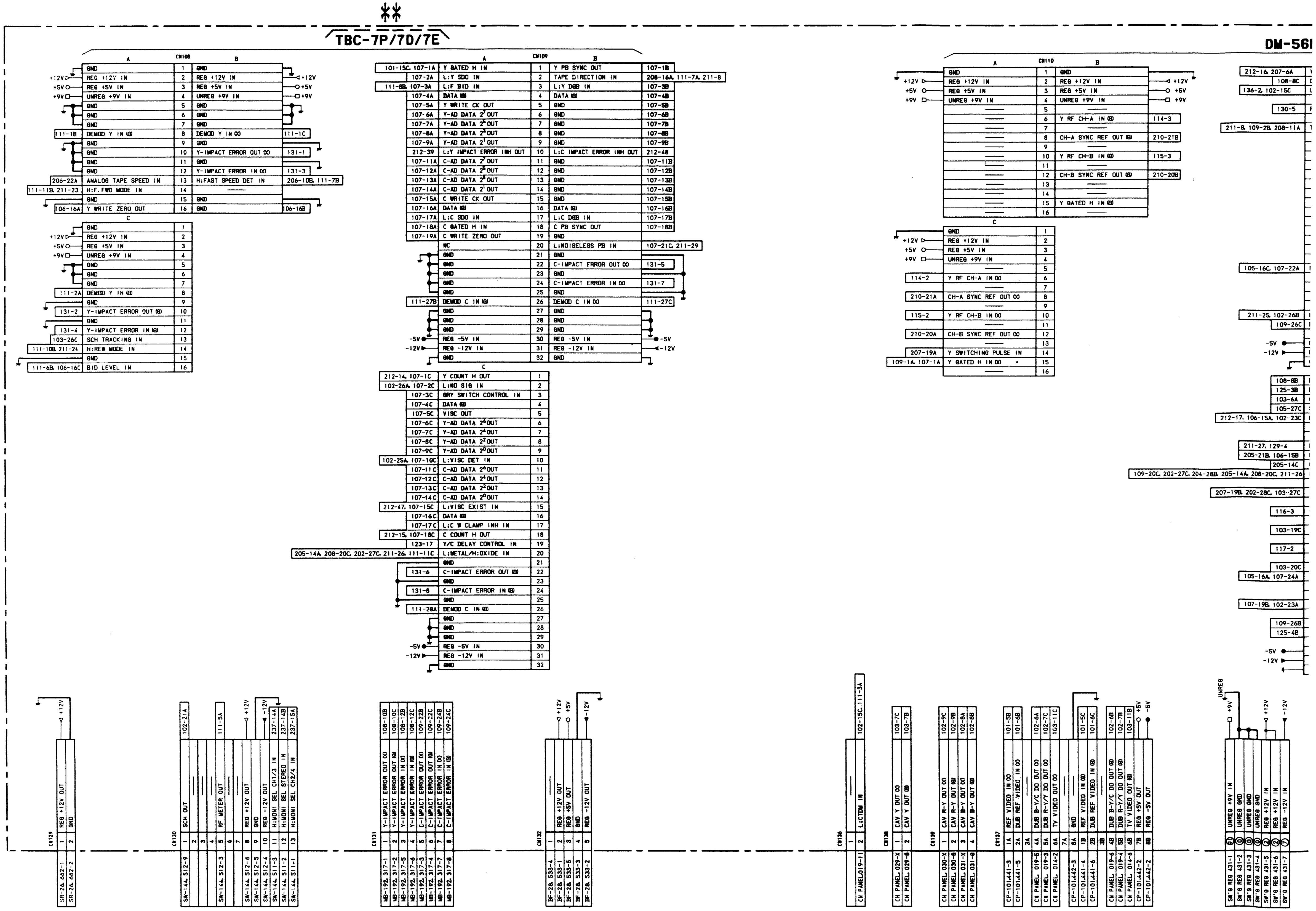
1-622-578-21
BVW-60P
BVW-65P
BVW-95P

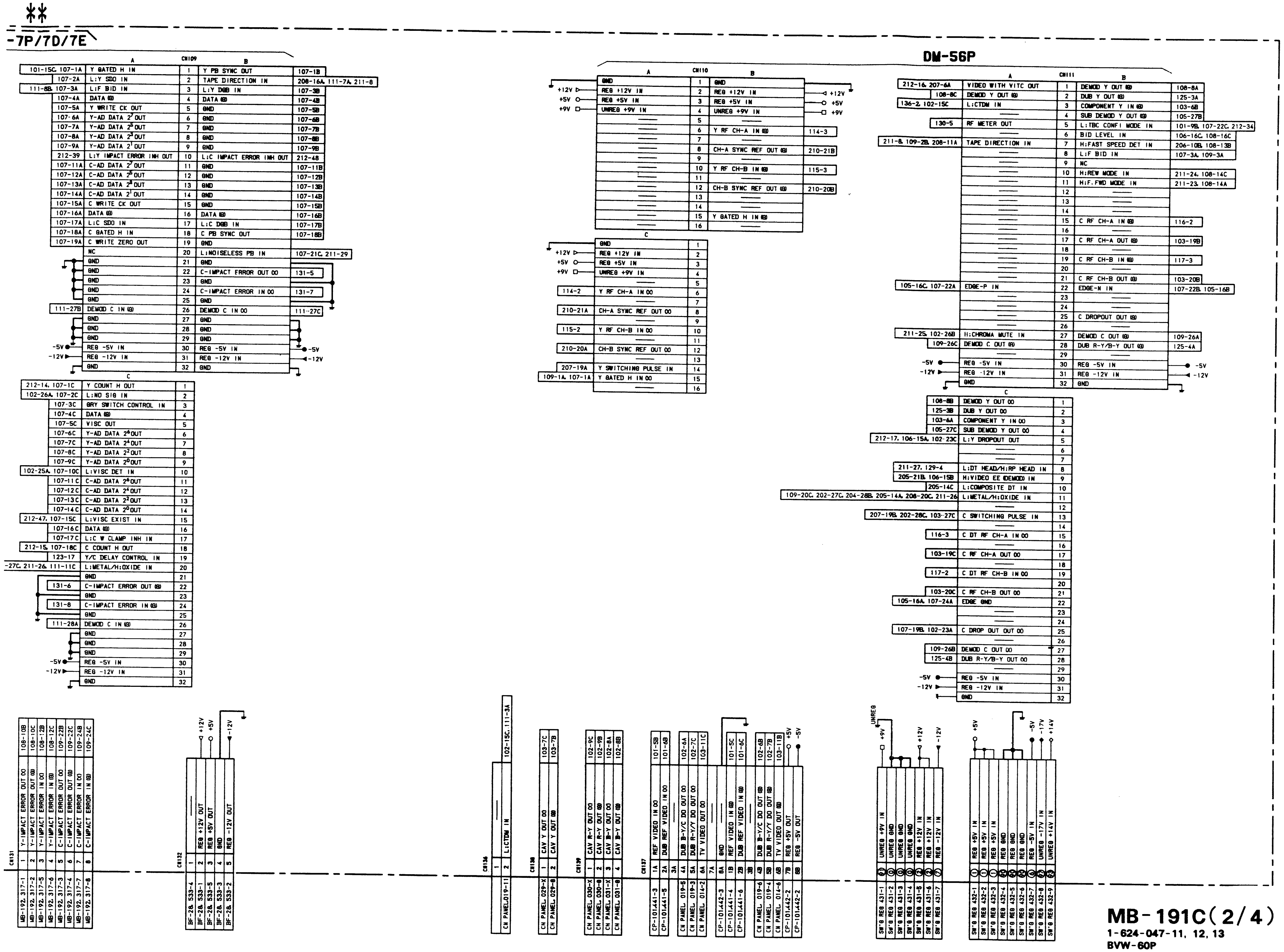

IC2
LA7205
TAPE BEGIN SENSOR
TP402
R401 30k :RN
C402 0.1 :PT
C404 470p :CM
ANA +5V
TP403
TAPE BEGIN SENSOR
303-11A TAPE BEGIN SENS IN (X)
303-11B TAPE BEGIN SENS IN (G)
303-11C GND
303-10A GND
303-10B GND
303-10C GND
303-9A GND
303-9B GND
CH2
CH1
OSC
DET
VCC
AMP
ABC DET
COMP.
DRIVFR
SEL
FIL
GND
C401 0.0033 :PP
R402 47k
C403 0.047 :CCS
C405 47 6.3V
L:TAPE BEGIN OUT 303-28B
SY-61, 301-27C
IC3
LA7205
TAPE END SENSOR
TP404
R403 51k :RN
C407 0.1 :PT
C409 330p :CM
ANA +5V
TP405
PD-35, 854-1
PD-35, 854-2
303-13A TAPE END SENS IN (X)
303-13B TAPE END SENS IN (G)
303-13C GND
303-12A GND
303-12B GND
303-12C GND
303-14A GND
303-14B GND
303-14C GND
C406 0.0015 :PP
R404 47k
C408 0.047 :CCS
C410 47 6.3V
L:TAPE END OUT 303-28C
SY-61, 301-28A
IC1
BX-343
CONDENSATION
R407 100k
C412 1 50V
+12V
TP406
RE-28, 820-1
303-9C CONDENSATION SENSER IN
AMP
DET
R405 82k
R406 47k
C411 0.001 :PT
C413 2.2 50V
C414 47 16V
L:HUMID OUT 303-28A
SY-61, 301-27B
ANA +5V
1/5 UNREG GND IN
1/5 ANA +5V IN
JR401
303-4A UNREG +9V
303-4B UNREG +9V
303-4C UNREG +9V
*1 R411 0.01
SY-61, 301-29A
SY-61, 301-29B
304-4C KEY SERIAL CMD IN
304-5A INT KEY STATUS OUT
1/5 KEY SERIAL CMD IN
*1 E401
TP401 *1
UNREG GND OUT 305-1
UNREG GND OUT 305-2
UNREG GND OUT 305-3
UNREG +5V/+9V OUT 305-4
UNREG +5V/+9V OUT 305-5
UNREG +5V/+9V OUT 305-6
KEY SERIAL CMD OUT 305-7
INT KEY SERIAL STATUS IN 305-8
L:KEY BOARD TEST OUT 305-9
NC 305-10
L:EXT KEY BOARD TEST OUT 303-8C
KY-96, 321-7
KY-96, 321-8
KY-96, 321-9
SY-64, 310-9

SY-64AP(5/5)

1-622-578-21
BVW-60P
BVW-65P
BVW-95P

MB-191C (2/4) ; MOTHER BOARD


**
TBC-7P/7D/7E
DM-56
CN108
CN109
CN110
CN129
CN130
CN131
CN132
CN136
CN138
CN139
CN137
1
2
3
4
5


**
-7P/7D/7E
DM-56P
CN109
CN110
CN111
CN131
CN132
CN134
CN136
CN139
CN137
A
B
C

MB-191C(2/4)

1-624-047-11, 12, 13
BVW-60P

SECTION 17
PRINTED WIRING BOARDS

CIRCUIT CONFIGURATION

The circuit information is provided below.

System	Board	Circuit function
VIDEO	DM-56P	Y/C Demodulator
	DUS-259	Metal/Oxide LPF Switch
	DUS-269	C RF Phase EQ.
	DUS-288 *4	DO RF EQ.
	EQ-26 *4	RF EQ.
	EQ-28 *4	RF EQ.
	** TBC-7E	Time Base Corrector
	SW-261 *3	Metal/Oxide Y/C Delay Adjust Volume
	TBC-8P *7	Time Base Corrector
	NR-25 *7	Y Digital Noise Reduction
	TBC-12P *8	Time Base Corrector
	NR-32 *8	Y Digital Noise Reduction, Read Clock Generator
	TBC-9P	Time Base Corrector
	EN-48P	C Encoder
	VO-18AP	Video Output
	DUS-270	Squelch Buffer
	DEC-39A*5	Edge Detector
	DEC-46AP *6	Edge Detector
	CP-103AP	Sub Control Panel
	CP-101AP	REF. Video Input
AUDIO	AU-118P	LNG Audio Head Amplifier
	AFM-1A	AFM Audio Demodulator
	FL-61	Low-pass Filter
	BF-28A	Audio Buffer/Level Detector
	VR-42	Audio PB Volume

System	Board	Circuit function
AUDIO	CP-111 CP-161A	Audio Output Amplifier/Driver
	CP-113	Audio Balanced Amplifier
	HP-33	Headphones Amplifier/Jack
	VR-62	Headphones Level Volume
	DP-74	Audio Level Meter
	DP-73	DC-AC/DC Converter
	SW-144A	Select Switch/Display
	DP-72	RF Meter LED
	VR-61	Tracking Control Volume
SERVO	SV-82A	Capstan/Drum Servo
	SV-83B	Reel Servo
	SV-84P	Capstan/Drum Servo
	RE-28	Capstan/Drum Motor Driver
	PTC-20	Cassette Detector (Tape Thickness, Reel Hub Diameter, Metal/Oxide)
	PTC-36	Cassette Detector (Tape Thickness, Reel Hub Diameter, Metal/Oxide)
	PTC-21	Reel Table Position Detector
	DR-56	Capstan/Reel Motor Driver & Drum Error Amplifier
	RE-36	Reel Motor Driver
	RM-40	Reel Motor
	DE-15	Reel Motor FG
	SE-57	Threading Motor Control
	PTC-31	Threading Motor FG
	TR-18	Tape Tension Sensor

System	Board	Circuit function
SYSTEM CONTROL	SY-61A	System Control
**	DUS-570	Fan Motor Error Detector
	SY-64AP	Time Code Reader
	KY-96C	Keyboard
	KY-107A	Keyboard
	DP-71A	Time Counter Display
	PTC-32	Search Dial
	PT-9	Power Transistor
	PD-35	Pinch/Cleaning Solenoid
	PTC-15	Thread/Unthread End Sensor
	RM-57	Remote Connector
	TC-40AP	LTC PB Amplifier
	CL-14	Cassette-up Compartment
	CL-24 *9	Cassette-up Compartment LED
	PC-32 *1	Large/Small Cassette Detector
	PC-47 *2	Large/Small Cassette Detector
	PC-33	Cassette DOWN Detector
	PC-41	Cassette IN Detector
	CCM-2	UP/DOWN Motor
	HC-11	Hours Meter
OTHERS	AC-81 *1	Relay Board of AC Inlet
	AC-96 *2	Relay Board of AC Inlet
	M1	Switching Regulator
	M2	Switching Regulator
	C1	Switching Regulator
	C2	Switching Regulator
	MB-191C	Mother Board
	MB-192	Mother Board
	EX-116	Extension Board
	EX-134	Extension Board
	EX-151	Extension Board

*1...Serial No.: up to 10170
*2...Serial No.: 10171 and higher
*3...Serial No.: up to 10270
*4...Serial No.: 10271 and higher
*5...Serial No.: up to 10622
*6...Serial No.: 10623 and higher
*7...Serial No.: up to 10712
*8...Serial No.: 10713 and higher
*9...Serial No.: 11083 and higher

TBC-7D; TIME BASE CORRECTOR

**
S/N 10713 through 11738

TBC-7D (1-622-548-14,15)

REF.NO.	TYPE	PIN.NO					
		+12V	+9V	+5V	GND	−5V	−12V
IC 101	SBX4002-01	2.11			4.13		5.14
IC 102	TL431CLPB	*	*	*	*	*	*
IC 103	TL082CPS	8					4
IC 105	CXA1096M			3.25.26	13.14.15.18	13.17	
IC 108	CXD1310AM			21	7		
IC 201	TA7357AP	*			5		
IC 203	MB4002PF	8			1		4
IC 205	MB4002PF	8			1		4
IC 206	SN74LS221NS			16	8		
IC 207	TL082CPS	8					4
IC 208	SN74LS06NS			*	7		
IC 209	MC10H116M				1.16	8	
IC 210	MC10H125M			9	16	8	
IC 211	CXD1045AQ			17.39	1.6.28		
IC 212	BX-1461	8			4.7		
IC 213	TL082CPS	8					4
IC 214	TL601CPS	8					5
IC 215	SN74LS221NS			16	8		
IC 216	BX-1460	10			8		9
IC 217	μPC319G2	11			3.8		6
IC 218	TC74HC221F			16	8		
IC 219	TCS74HC74F			14	7		
IC 220	TL082CPS	8					4
IC 221	TL601CPS	8			1		5
IC 222	μPC339G2	3			12		
IC 223	TC74HC32F			14	7		
IC 224	TC74HC00F			14	7		
IC 225	TL082CPS	8					4
IC 226	TL601CPS	8			1		5
IC 231	TC74HC08F			14	7		
IC 232	TL601CPS	8			1		5
IC 235	TC74HC157F			16	8		
IC 236	TC74HC157F			16	8		
IC 237	TL082CPS	8		16	8		4
IC 238	SN74LS123			16			
IC 239	TC74HC32F			10.12	9.13		
IC 241	μPC393G			5	4		8
IC 401	SBX-4002-01	2.11			4.13		5.14
IC 403	CXA1096M			13.17	12.14.15.18		
IC 404	CXD1310AM		21		7		
IC 501	TC74HC00F			14	7		
IC 502	TA7357AP	*			5		
IC 504	TL082CPS	8					4
IC 505	SN74LS06NS			14	7		
IC 506	MC10H125M			9	16		
IC 507	CXD1045Q			17.39	1.6.28		
IC 508	BX-1461	8			4.6		
IC 509	TL082CPS	8					4
IC 510	TL601CPS	8			1		5
IC 511	BX-1460	10			8		9
IC 512	SN74LS221NS			16	8		
IC 513	MB4002PF	8			1		4
IC 514	TL601CPS	8			1		5
IC 516	TL082CPS	8					4
IC 517	TL082CPS	8					4
IC 519	TC74HC86F			14	7		
IC 520	TL601CPS	8			1		5
IC 610	TL431CLPB	*	*	*	*	*	*
IC 611	TL082CPS	8					4
IC 650	MB4002PF	8			1		4
IC 700	TL601CPS	8			1		5
IC 701	CX20158			12	5.7.10	1	
IC 702	CX7930A			28	14		
IC 720	TC74HC08F			14	7		
IC 801	CX20158			14	5.7.10	1	

* REFER TO SCHEMATIC

TBC-7D (1-622-548-14,15)

CN108	H-7
CN109	D-7
D100	E-1
D200	G-2
D202	H-5
D203	H-5
D204	H-5
D205	J-4
D206	J-4
D207	J-4
D208	G-6
D209	H-2
D210	J-3
D211	J-6
D212	J-4
D213	J-5
D214	H-2
D400	E-1
D503	B-5
D504	B-5
D505	A-5
D506	A-6
D507	B-6
D508	C-2
D650	E-3
D680	F-3
D700	J-5
D704	J-5
D705	J-6
D706	J-6
D707	G-2
DL500	B-1
E100	F-1
E101	F-3
E200	H-2
E201	H-5
E202	J-4
E400	D-1
E401	C-3
E500	A-1
E501	A-4
E502	A-6
FL100	E-1
FL400	D-1
IC101	F-2
IC102	E-5
IC103	E-4
IC105	F-4
IC108	F-5
IC201	H-1
IC203	G-2
IC205	H-2
IC206	G-6
IC207	H-5
IC208	J-4
IC209	H-4
IC210	G-4
IC211	G-3
IC212	G-7
IC213	G-6
IC214	J-6
IC215	H-3
IC216	J-3
IC217	H-2
IC218	H-2
IC219	D-6
IC220	G-6
IC221	J-6
IC222	H-7
IC223	G-7
IC224	H-6
IC225	J-6
IC226	H-5
IC228	J-5
IC231	G-7
IC232	J-6
IC234	G-6
IC235	H-3
IC236	G-3
IC237	G-1
IC238	J-2
IC239	H-6
IC240	G-1
IC241	J-6
IC401	D-2
IC403	D-4
IC404	D-5
IC501	A-4
IC502	C-1
IC504	B-6
IC505	B-4
IC506	C-4
IC507	B-3
IC508	A-2
IC509	A-6
IC510	A-6
IC511	D-6
IC512	C-5
IC513	C-2
IC514	A-1
IC516	A-3
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IC519	B-6
IC520	A-5
IC522	B-2
IC523	C-2
IC610	D-5
IC611	D-4
IC650	E-3
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IC701	J-2
IC702	G-5
IC720	F-6
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Q101	E-4
Q102	E-4
Q103	F-1
Q104	F-1
Q105	E-1
Q106	E-1
Q201	H-5
Q203	G-6
Q204	G-1
Q205	G-1
Q206	G-1
Q207	G-2
Q208	G-2
Q211	J-2
Q212	J-3
Q213	J-2
Q214	H-3
Q215	G-7
Q220	J-1
Q221	J-1
Q222	J-4
Q223	J-4
Q224	H-6
Q225	H-6
Q226	J-6
Q227	H-7
Q228	H-7
Q229	H-2
Q230	H-2
Q400	E-2
Q401	D-1
Q402	E-1
Q403	E-1
Q404	E-1
Q500	B-2
Q501	B-2
Q503	B-4
Q504	A-3
Q505	A-1
Q512	B-2
Q513	B-2
Q514	B-2
Q515	B-2
Q516	A-3
Q610	D-4
Q611	D-4
Q680	G-3
Q681	D-3
Q800	C-2
Q801	C-2
Q802	B-3
Q803	C-1
RV100	F-1
RV101	F-2
RV102	E-4
RV103	F-4
RV200	J-3
RV201	F-7
RV202	J-5
RV203	J-6
RV400	C-2
RV401	C-2
RV402	C-4
RV500	C-7
RV501	A-2
RV502	C-6
RV503	C-6
RV610	E-4
S101	H-1
S200	H-1
TH201	F-6
TH202	J-3
TH501	A-2
TH502	C-5
TP100	E-1
TP101	G-2
TP102	F-3
TP200	G-5
TP201	H-5
TP202	J-7
TP203	G-4
TP204	G-4
TP205	G-3
TP206	H-4
TP207	J-5
TP208	F-6
TP400	E-1
TP401	C-2
TP402	C-3
TP500	A-4
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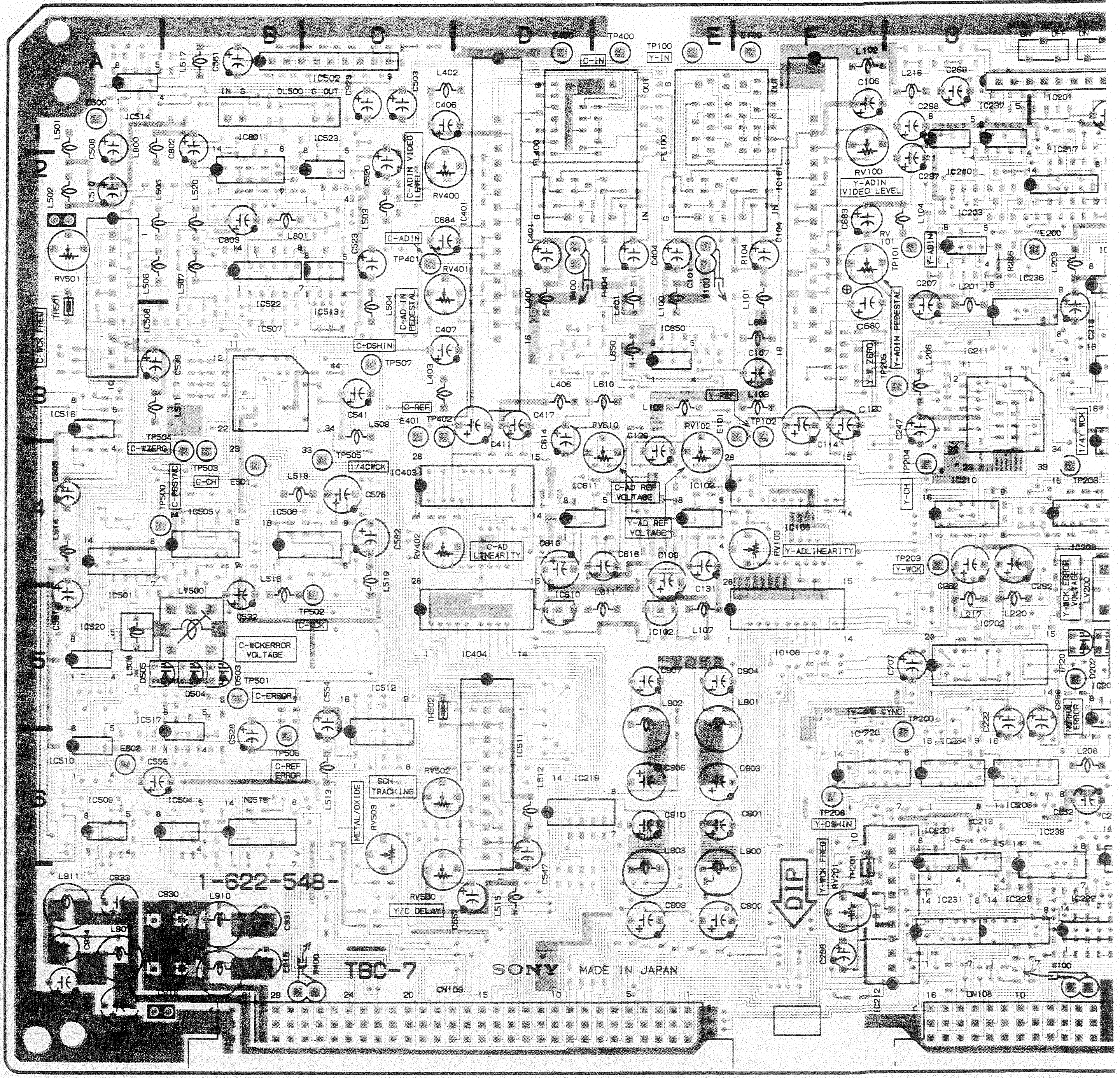
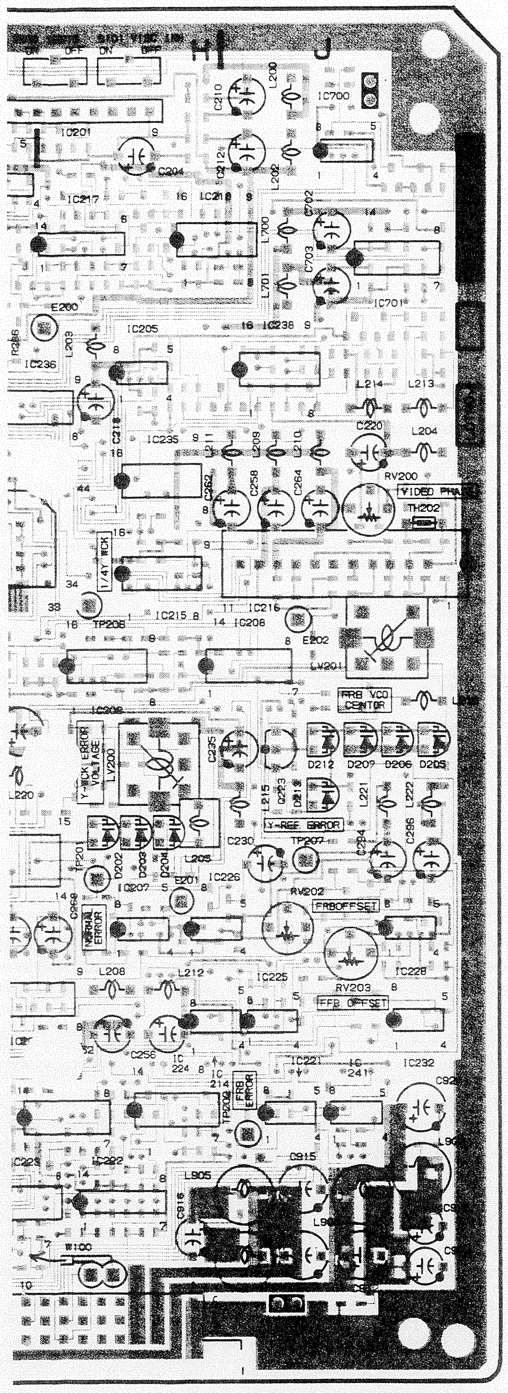
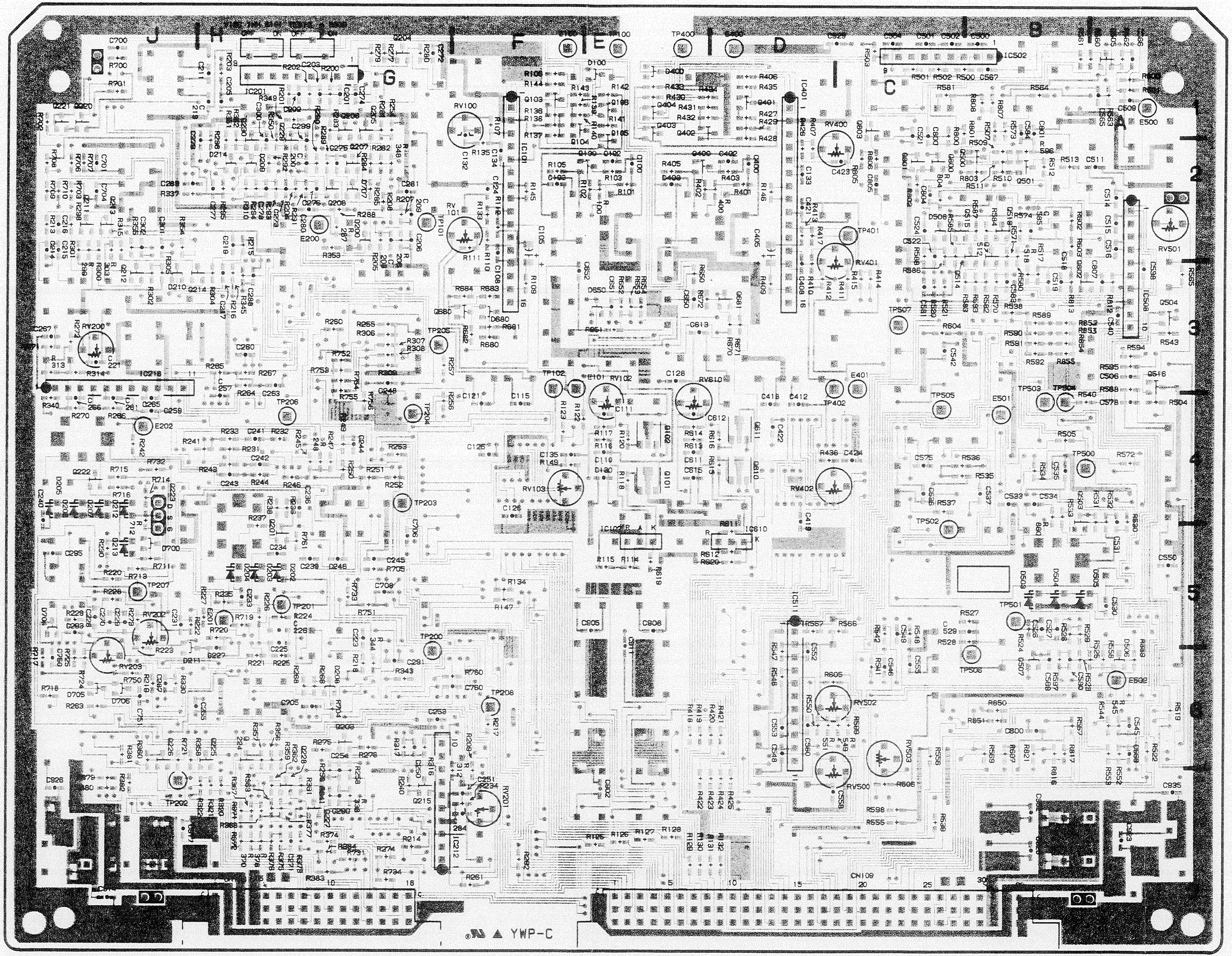
TP506	B-6
TP507	C-3





TBC-7D —COMPONENT SIDE—
1-622-548-14,15
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P



TBC-7D —SOLDERING SIDE—
1-622-548-14,15
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

TBC-7E (1-622-548-21)

REF. NO.	TYPE	PIN. NO					
		+12V	+9V	+5V	GND	−5V	−12V
IC 101	SBX4002-01	2. 11			4. 13		5. 14
IC 102	TL431CLPB	*	*	*	*	*	*
IC 103	TL082CPS	8					4
IC 105	CXA1096M			3. 25. 26	13. 14. 15. 18	13. 17	
IC 108	CXD1310AM			21	7		
IC 201	TA7357AP	*			5		
IC 203	MB4002PF	8			1		4
IC 205	MB4002PF	8			1		4
IC 206	SN74LS221NS			16	8		
IC 207	TL082CPS	8					4
IC 208	SN74LS06NS			*	7		
IC 209	MC10H116M				1. 16	8	
IC 210	MC10H125M			9	16	8	
IC 211	CXD1045AQ			17. 39	1. 6. 28		
IC 212	BX-1461	8			4. 7		
IC 213	TL082CPS	8					4
IC 214	TL601CPS	8					5
IC 215	SN74LS221NS			16	8		
IC 216	BX-1460	10			8		9
IC 217	μPC319G2	11			3. 8		6
IC 218	TC74HC221F			16	8		
IC 219	TCS74HC74F			14	7		
IC 220	TL082CPS	8					4
IC 221	TL601CPS	8			1		5
IC 222	μPC339G2	3			12		
IC 223	TC74HC32F			14	7		
IC 224	TC74HC00F			14	7		
IC 225	TL082CPS	8					4
IC 226	TL601CPS	8			1		5
IC 231	TC74HC08F			14	7		
IC 232	TL601CPS	8			1		5
IC 235	TC74HC157F			16	8		
IC 236	TC74HC157F			16	8		
IC 237	TL082CPS	8		16	8		4
IC 238	SN74LS123			16			
IC 239	TC74HC32F			10. 12	9. 13		
IC 241	μPC393G			5	4		8
IC 401	SBX-4002-01	2. 11			4. 13		5. 14
IC 403	CXA1096M			13. 17	12. 14. 15. 18		
IC 404	CXD1310AM		21		7		
IC 501	TC74HC00F			14	7		
IC 502	TA7357AP	*			5		
IC 504	TL082CPS	8					4
IC 505	SN74LS06NS			14	7		
IC 506	MC10H125M			9	16		
IC 507	CXD1045Q			17. 39	1. 6. 28		
IC 508	BX-1461	8			4. 6		
IC 509	TL082CPS	8					4
IC 510	TL601CPS	8			1		5
IC 511	BX-1460	10			8		9
IC 512	SN74LS221NS			16	8		
IC 513	MB4002PF	8			1		4
IC 514	TL601CPS	8			1		5
IC 516	TL082CPS	8					4
IC 517	TL082CPS	8					4
IC 519	TC74HC86F			14	7		
IC 520	TL601CPS	8			1		5
IC 610	TL431CLPB	*	*	*	*	*	*
IC 611	TL082CPS	8					4
IC 650	MB4002PF	8			1		4
IC 700	TL601CPS	8			1		5
IC 701	CX20158			12	5. 7. 10	1	
IC 702	CX7930A			28	14		
IC 720	TC74HC08F			14	7		
IC 801	CX20158			14	5. 7. 10	1	

* REFER TO SCHEMATIC

TBC-7E (1-622-548-21)

CN108	H-7
CN109	D-7
CN901	D-1
CN902	F-1
D100	E-1
D200	G-2
D202	H-5
D203	H-5
D204	H-5
D205	J-4
D206	J-4
D207	J-4
D208	G-6
D209	H-2
D210	J-3
D211	J-6
D212	J-4
D213	J-5
D214	H-2
D400	E-1
D503	B-5
D504	B-5
D505	A-5
D506	A-6
D507	B-6
D508	C-2
D650	E-3
D680	F-3
D700	J-5
D704	J-5
D705	J-6
D706	J-6
D707	G-2
DL500	B-1
E100	F-1
E101	F-3
E200	H-2
E201	H-5
E202	J-4
E400	D-1
E401	C-3
E500	A-1
E501	A-4
E502	A-6
FL100	E-1
FL400	D-1
IC101	F-2
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IC103	E-4
IC105	F-4
IC108	F-5
IC201	H-1
IC203	G-2
IC205	H-2
IC206	G-6
IC207	H-5
IC208	J-4
IC209	H-4
IC210	G-4
IC211	G-3
IC212	G-7
IC213	G-6
IC214	J-6
IC215	H-3
IC216	J-3
IC217	H-2
IC218	H-2
IC219	D-6
IC220	G-6
IC221	J-6
IC222	H-7
IC223	G-7
IC224	H-6
IC225	J-6
IC226	H-5
IC228	J-5
IC231	G-7
IC232	J-6
IC234	G-6
IC235	H-3
IC236	G-3
IC237	G-1
IC238	J-2
IC239	H-6
IC240	G-1
IC241	J-6
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IC403	D-4
IC404	D-5
IC501	A-4
IC502	C-1
IC504	B-6
IC505	B-4
IC506	C-4
IC507	B-3
IC508	A-2
IC509	A-6
IC510	A-6
IC511	D-6
IC512	C-5
IC513	C-2
IC514	A-1
IC516	A-3
IC517	B-6
IC519	B-6
IC520	A-5
IC522	B-2
IC523	C-2
IC610	D-5
IC611	D-4
IC650	E-3
IC700	J-1
IC701	J-2
IC702	G-5
IC720	F-6
IC801	B-2
LV200	H-5
LV201	J-4
LV500	B-5
Q100	F-2
Q101	E-4
Q102	E-4
Q103	F-1
Q104	F-1
Q105	E-1
Q106	E-1
Q201	H-5
Q203	G-6
Q204	G-1
Q205	G-1
Q206	G-1
Q207	G-2
Q208	G-2
Q211	J-2
Q212	J-3
Q213	J-2
Q214	H-3
Q215	G-7
Q220	J-1
Q221	J-1
Q222	J-4
Q223	J-4
Q224	H-6
Q225	H-6
Q226	J-6
Q227	H-7
Q228	H-7
Q229	H-2
Q230	H-2
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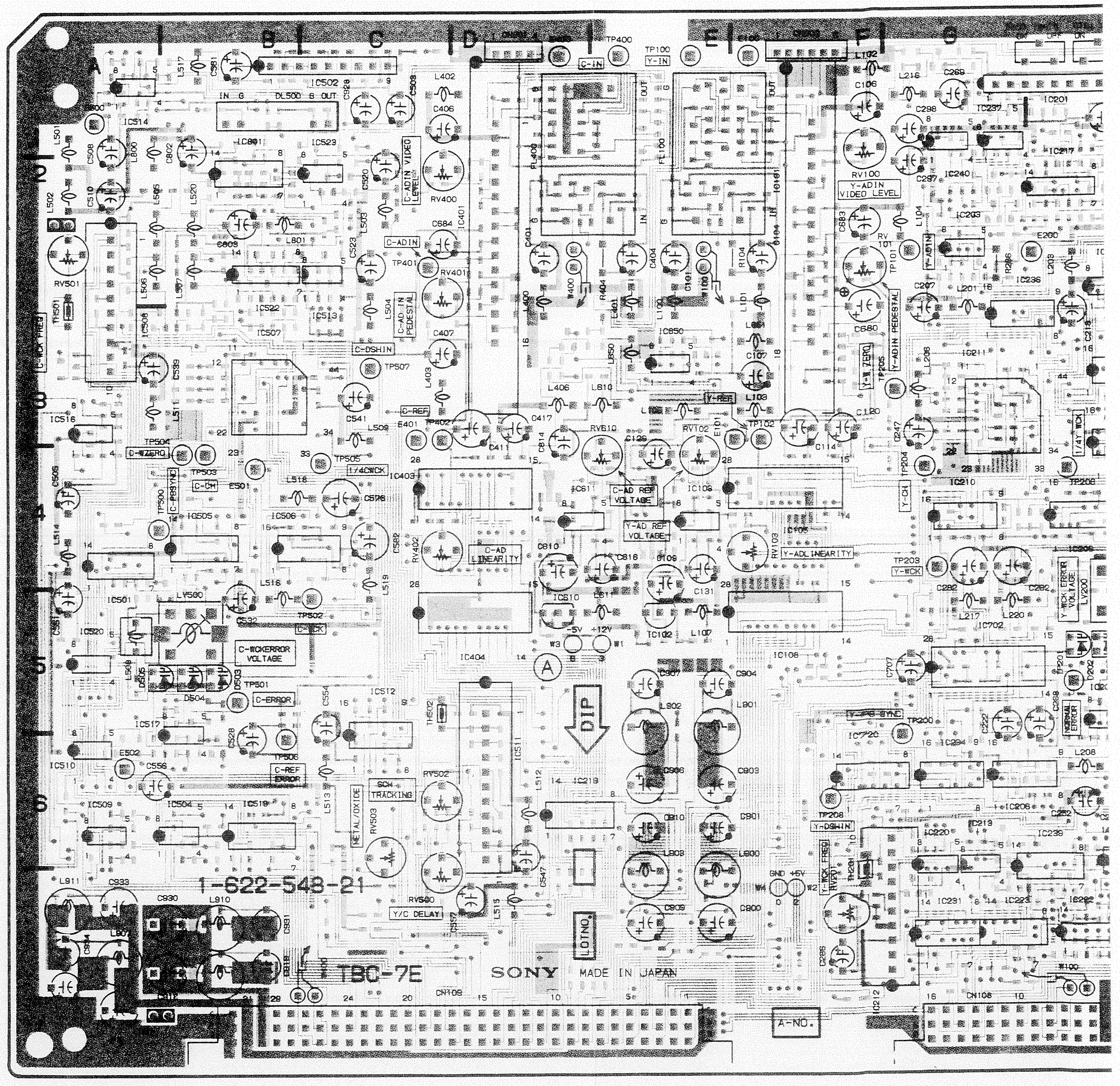
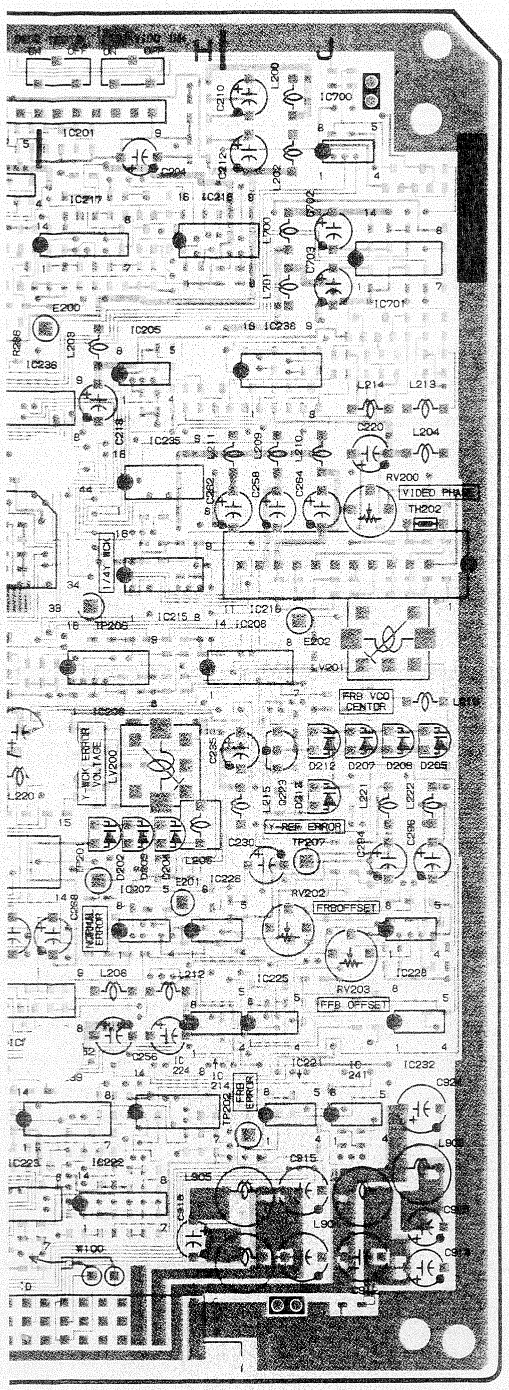
Q401	D-1
Q402	E-1
Q403	E-1
Q404	E-1
Q500	B-2
Q501	B-2
Q503	B-4
Q504	A-3
Q505	A-1
Q512	B-2
Q513	B-2
Q514	B-2
Q515	B-2
Q516	A-3
Q610	D-4
Q611	D-4
Q680	G-3
Q681	D-3
Q800	C-2
Q801	C-2
Q802	B-3
Q803	C-1
RV100	F-1
RV101	F-2
RV102	E-4
RV103	F-4
RV200	J-3
RV201	F-7
RV202	J-5
RV203	J-6
RV400	C-2
RV401	C-2
RV402	C-4
RV500	C-7
RV501	A-2
RV502	C-6
RV503	C-6
RV610	E-4
S101	H-1
S200	H-1
TH201	F-6
TH202	J-3
TH501	A-2
TH502	C-5
TP100	E-1
TP101	G-2
TP102	F-3
TP200	G-5
TP201	H-5
TP202	J-7
TP203	G-4
TP204	G-4
TP205	G-3
TP206	H-4
TP207	J-5
TP208	F-6
TP400	E-1
TP401	C-2
TP402	C-3
TP500	A-4
TP501	B-5
TP502	C-5
TP503	B-4
TP504	B-4
TP505	C-4
TP506	B-6
TP507	C-3

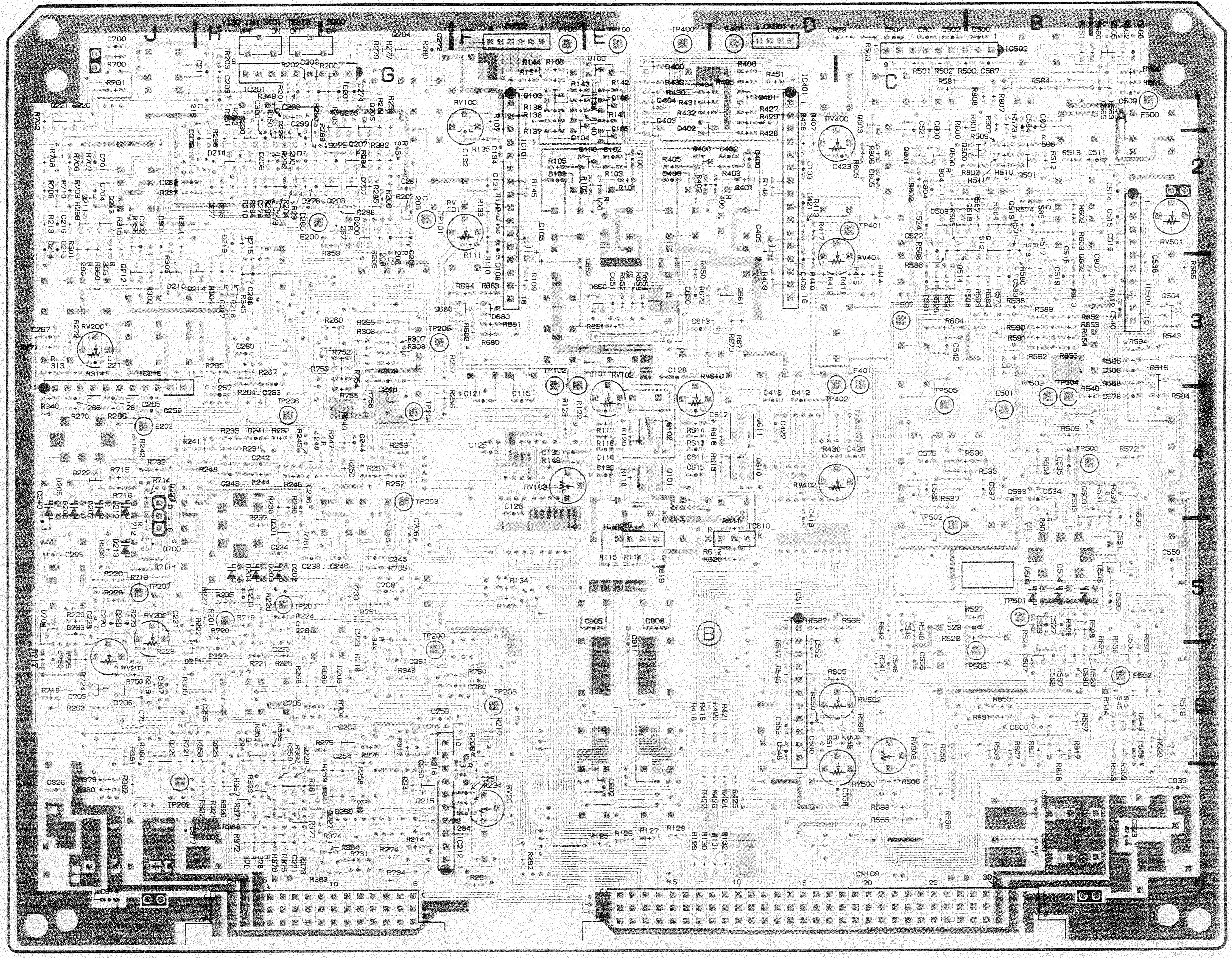
**TBC−7E; TIME BASE CORRECTOR

S/N 11739 and higher


A
B
C
D
E
F
G
1
2
3
4
5
6
1-622-548-21
TBC-7E
SONY
MADE IN JAPAN
DIP
C-IN
Y-IN
TP100
TP400
Y-ADIN VIDEO LEVEL
C-ADIN VIDEO LEVEL
C-AD IN PEDESTAL
Y-ADIN PEDESTAL
C-AD LINEARITY
Y-ADL INEARITY
C-AD REF VOLTAGE
Y-AD REF VOLTAGE
C-WCKERROR VOLTAGE
C-ERROR
C-REF ERROR
SCH TRACKING
Y/C DELAY
METAL/OXIDE
C-WCK FREQ
Y-WCK FREQ
Y-WCK ERROR VOLTAGE
Y-DSHIN
C-DSHIN
C-REF
Y-REF
C-WZERO
Y-WCK
C-PBSYNC
Y-PB-SYNC
LOT NO.
A-NO.
CN108
CN109


H
J
IC201
IC217
IC205
IC235
IC700
IC701
RV200
TH202
VIDEO PHASE
IC218
IC208
LV201
FRB VCO CENTOR
LV200
RV202
RV203
FRB OFFSET
FFB OFFSET
Y-REF ERROR
IC226
IC222
IC223
IC221
IC232
L905
C915
E200
E202

TBC-7E —COMPONENT SIDE—
1-622-548-21
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P


J
H
G
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E
D
C
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A
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2
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4
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7
B
RV100
RV101
RV102
RV103
RV200
RV201
RV202
RV203
RV400
RV401
RV402
RV500
RV501
RV502
RV503
RV610
TP100
TP200
TP201
TP202
TP203
TP204
TP205
TP206
TP207
TP208
TP400
TP401
TP402
TP500
TP501
TP502
TP503
TP504
TP505
TP506
TP507
IC101
IC401
IC502
IC508
IC511
IC212
CN109
E200
E202
E400
E401
E500
E501
E502
C700
R700
R701
5
10
15
20
25
30

TBC-7E —SOLDERING SIDE—
1-622-548-21
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

SY-61/61A/61B/61C (1-622-577-14)

REF.NO.	TYPE	PIN NO.	
		+5V	GND
IC 1	SN74LS244N	20	10
IC 2	SN74LS245N	20	10
IC 3	SN74LS244N	20	10
IC 4	MBM2212-25P	18	8
** IC 5	SRM2016C10	24	12
IC 6	MBM27C256-25	28	14
IC 7	TMPZ84C011AF	27.51.90	28.50.77.100
IC 8	TC74HCU04P	14	7
IC 9	M54529AP	1.14	7
IC 10	TC74HC11P	14	7
IC 11	TC74HC138P	16	8
IC 12	TC74HC138P	16	8
IC 13	TC74HC14P	14	7
IC 14	TC4050BP	1	8
IC 15	TC4053BPHB	16	7.8
IC 16	TC74HC595P	16	8
IC 17	TC74HC597P	16	8
IC 18	NJM78L05A	*	3
IC 19	MB88303	22	11
IC 20	AM26LS30PC	1	4.5.8
IC 21	TC74HC157P	16	8
IC 22	TC74HC157P	16	8
** IC 23	SRM2016C10	24	12
IC 24	TC74HCU04P	14	7
IC 25	NJM2903D	8	4
IC 26	MC34051P	16	8
IC 27	TMPZ84C011AF	27.51.90	28.50.77.100
IC 28	TC74HC245P	20	10
IC 29	TC74HC245P	20	10
IC 30	LH0082AD	24	5
IC 31	M54529AP	1.14	7
IC 32	M54529AP	1.14	7
IC 33	TC4030BP	14	7
IC 34	TC74HC08P	14	7
IC 35	SN74LS697N	20	10
IC 36	SN74LS697N	20	10
IC 37	M54529AP	1.14	7
IC 38	CXD1095Q	26.58	10.25.42.57
IC 39	MBM27C512-25	28	14
IC 40	CXK5864PN-12L	28	14
IC 41	LH0084A	9	31
IC 42	TC74HC32P	14	7
IC 43	TC74HC32P	14	7
IC 44	TC74HC00P	14	7
IC 45	M51958BL	1	3
IC 46	TC74HC08P	14	7
IC 47	MC14538BCP	16	8
IC 48	μPD4069UBP	14	7
IC 49	MC74HC58N	14	7
IC 50	TC74HC32P	14	7
IC 51	TC74HCU04P	14	7
IC 52	TC74HC139P	14	7
IC 53	TC74HC02P	14	7

* REFER TO SCHEMATIC

SY-61/61A/61B/61C (1-622-577-14)

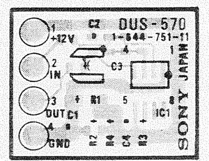
CN3	C-10
CN4	B-9
CN5	B-2
CN6	A-10
CN7	E-5
CN8	D-4
CN9	D-6
CN10	D-5
CN301	G-1
CN302	B-1
CV101	C-7
CV102	C-7
D101	C-12
D102	D-6
D103	D-6
D201	C-1
D202	C-1
D203	D-1
D204	D-1
D205	E-1
D206	E-1
D301	G-1
D302	H-4
E1	A-1
E2	A-12
E3	D-7
E4	H-1
E5	H-12
IC1	A-1
IC2	A-2
IC3	A-3
IC4	A-4
IC5	A-5
IC6	A-7
IC7	B-3
IC8	B-1
IC9	B-2
IC10	B-3
IC11	B-4
IC12	B-5
IC13	C-1
IC14	C-2
IC15	B-8
IC16	C-4
IC17	C-5
IC18	C-6
IC19	C-7
IC20	D-2
IC21	D-7
IC22	D-8
IC23	D-8
IC24	C-11
IC25	E-1
IC26	E-2
IC27	D-5

IC28	E-8
IC29	E-9
IC30	D-10
IC31	F-1
IC32	F-2
IC33	F-3
IC34	F-9
IC35	F-10
IC36	F-11
IC37	G-2
IC38	G-4
IC39	F-6
IC40	F-7
IC41	F-8
IC42	G-9
IC43	G-10
IC44	G-11
IC45	G-12
IC46	H-4
IC47	H-5
IC48	H-7
IC49	H-8
IC50	H-9
IC51	H-10
IC52	H-11
IC53	C-3
S101	E-12
S102	C-12
S103	B-12
S105	B-12
S106	A-11
S201	D-12
S202	F-12
S203	D-3
S204	E-3
S206	G-12
S302	H-6
TP1	H-2
TP2	H-9
TP3	F-9
TP4	H-9
TP5	F-7
TP8	H-7
TP9	G-6
TP10	D-11
TP11	D-11
TP12	H-10
TP13	C-11
TP14	C-11
TP15	G-6
TP16	G-6
TP17	A-12
TP18	C-12
X1	D-12
X2	H-8

SY-61/61A/61B/61C;
SYSTEM CONTROL
**DUS-570;
FAN MOTOR ERROR DETECTOR

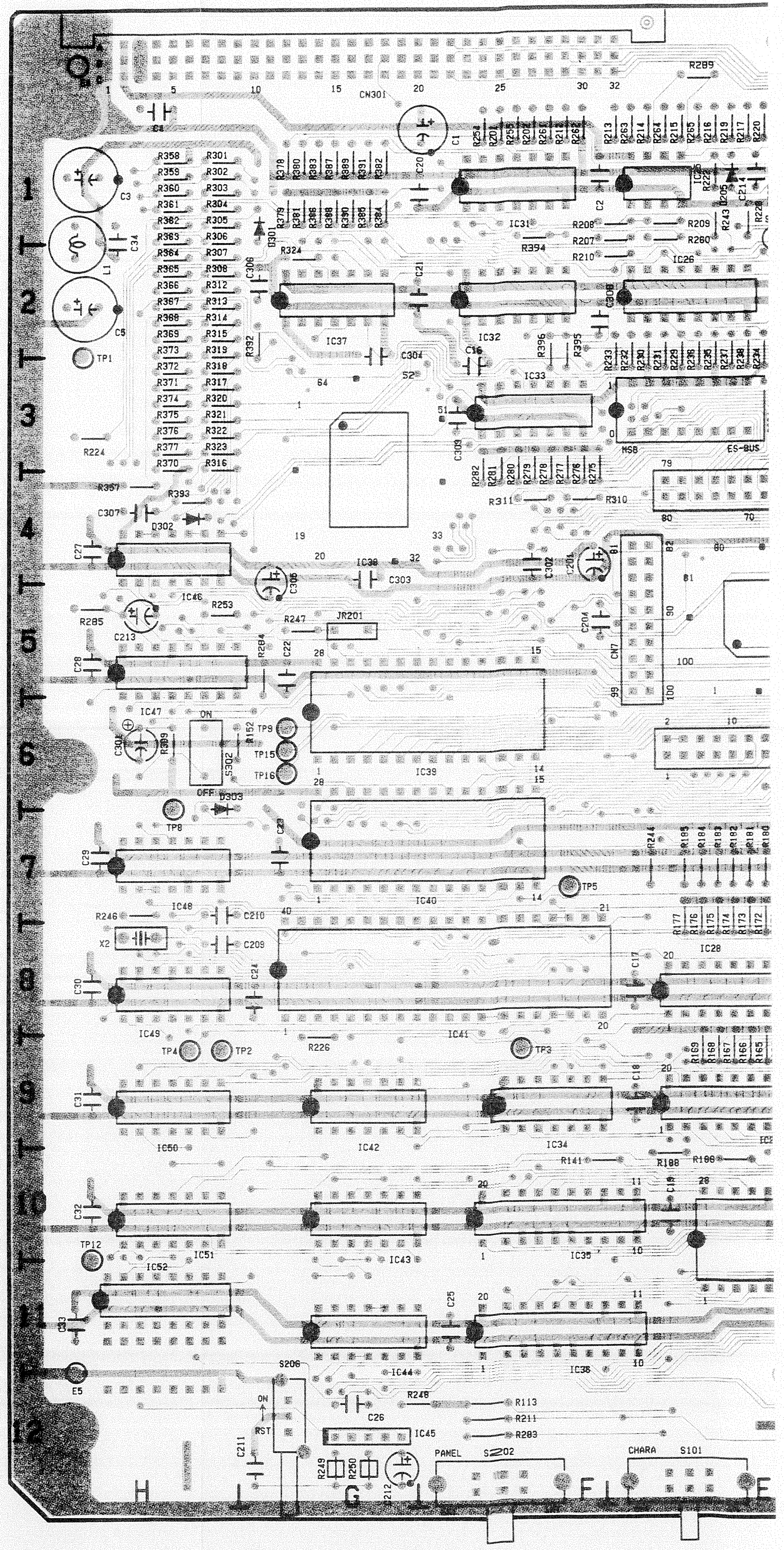
S/N 11739 and higher

**


1 +12V
2 IN
3 OUT
4 GND
DUS-570
1-644-751-11
C1
C2
C3
C4
R1
R2
R3
R4
IC1
SONY JAPAN

DUS-570 —COMPONENT SIDE—
1-644-751-11
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

	SY-61	SY-61A	SY-61B	SY-61C
BVW-60P		○		
BVW-65P		○		
BVW-70P	○			
BVW-75P	○			
BVW-95P			○	
BVW-96P				○


1
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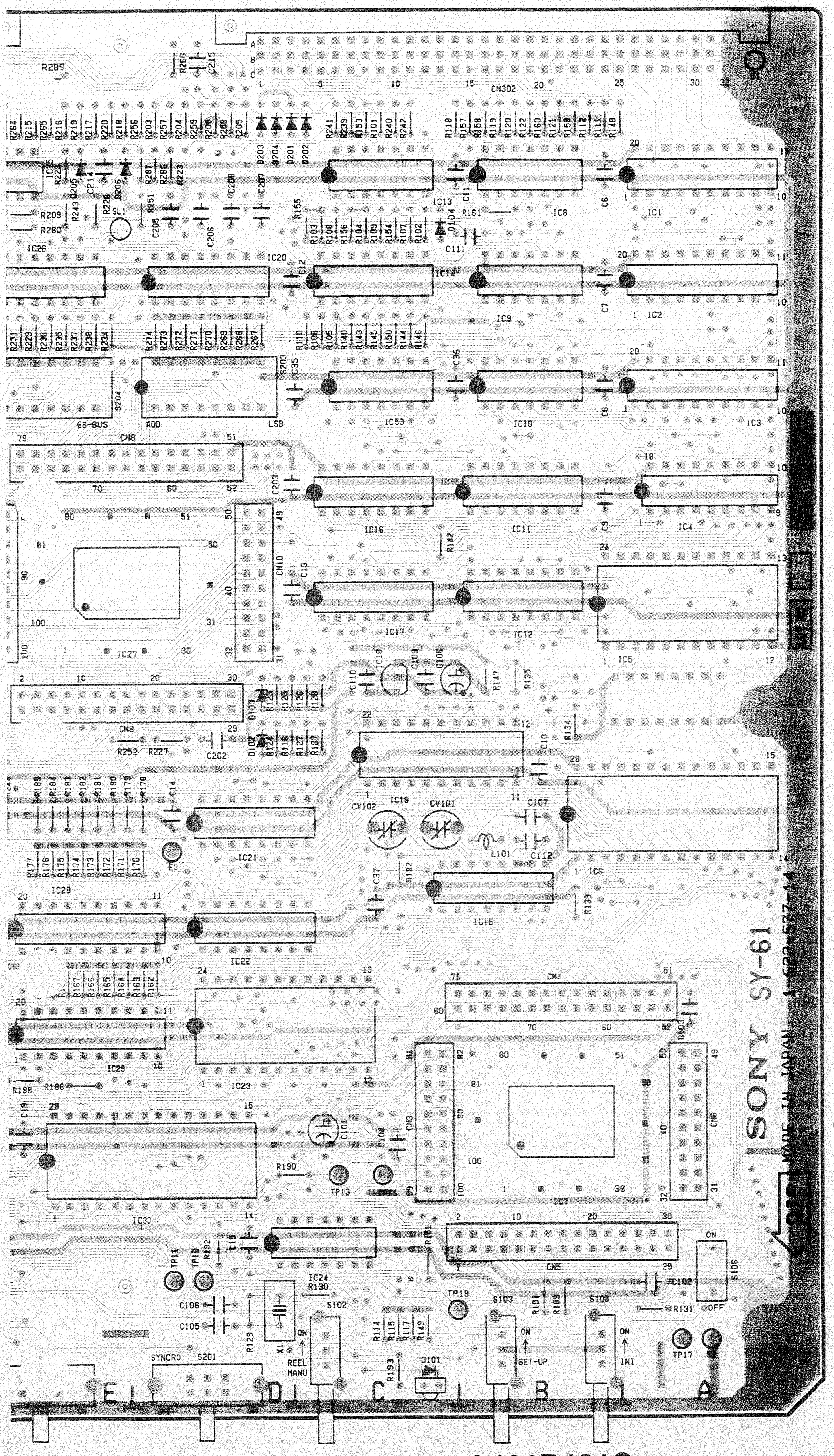
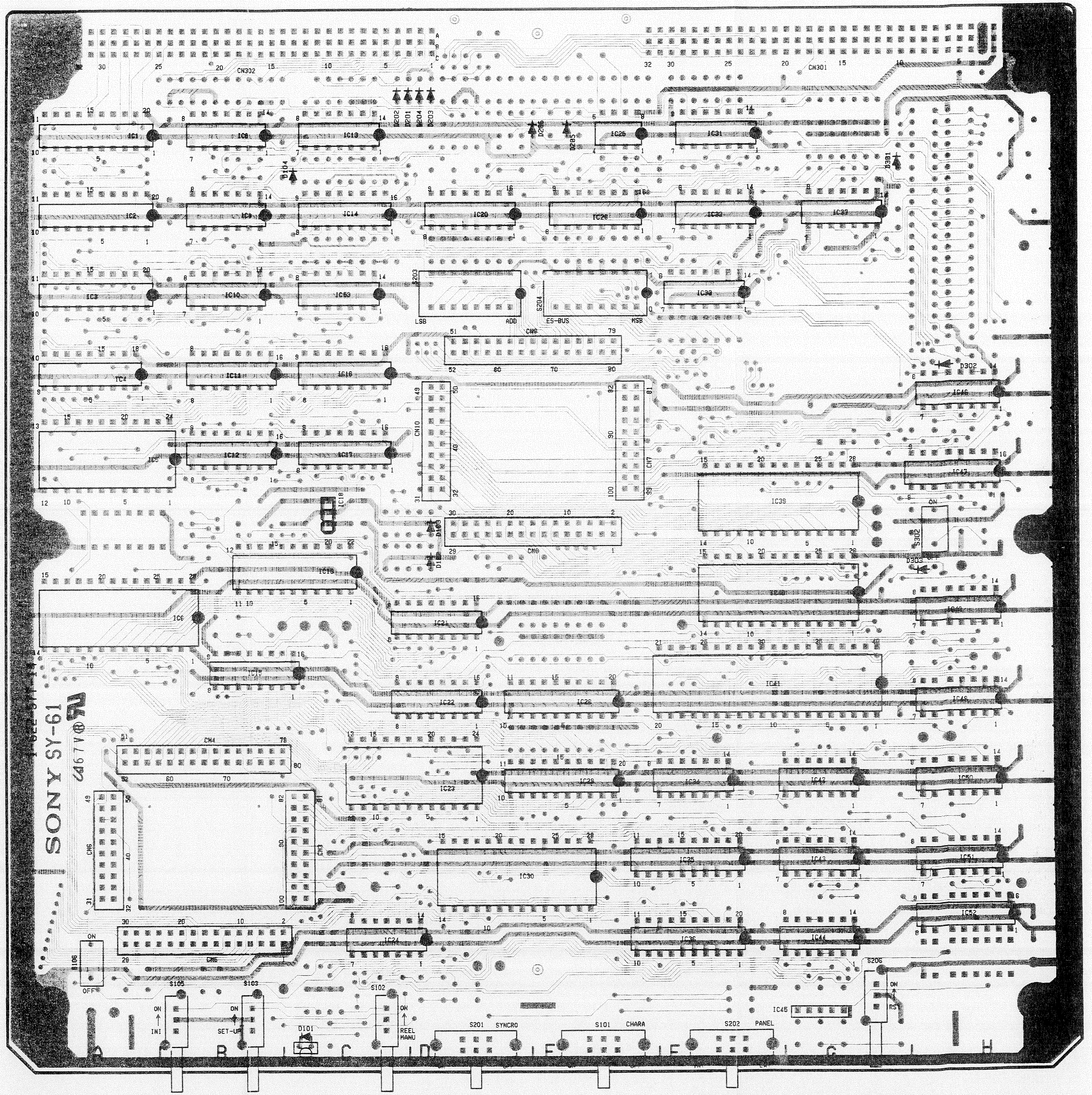
9
10
11
12
H
G
F
E
CN301
IC31
IC32
IC33
IC37
IC38
IC39
IC40
IC41
IC42
IC43
IC44
IC45
IC46
IC47
IC48
IC49
IC50
IC51
IC52
IC26
IC28
IC34
IC35
IC36
TP1
TP2
TP3
TP4
TP5
TP8
TP9
TP12
TP15
TP16
S206
PANEL
S202
CHARA
S101
E5
X2
JR201
D302
D303


SONY SY-61
MADE IN JAPAN 1-622-577-14
CN302
CN4
CN5
CN6
CN8
CN9
CN10
ES-BUS
ADD
LSB
S204
S203
SYNCRO
S201
REEL MANU
S102
SET-UP
S103
INI
S105
S106
ON
OFF
D101
TP17
TP18
A
B
C
D
E

SY-61/61A/61B/61C — COMPONENT SIDE —

1-622-577-14
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P


SONY SY-61
1-622-577-14
CN302
CN301
CN4
CN5
CN6
CN7
CN8
CN9
CN10
LSB
ADD
MSB
ES-BUS
S203
S204
S201 SYNCRO
S101 CHARA
S202 PANEL
S102
REEL MANU
S103
SET-UP
S105
INI
S106
S206
RS
IC45
D101
A
B
C
D
E
F
G
H

SY-61/61A/61B/61C — SOLDERING SIDE —

1-622-577-14
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

SY-64AP; SYSTEM CONTROL, TIME CODE READER, TIME BASE IMPACT ERROR CORRECTOR

SY-64AP (1-622-578-21)

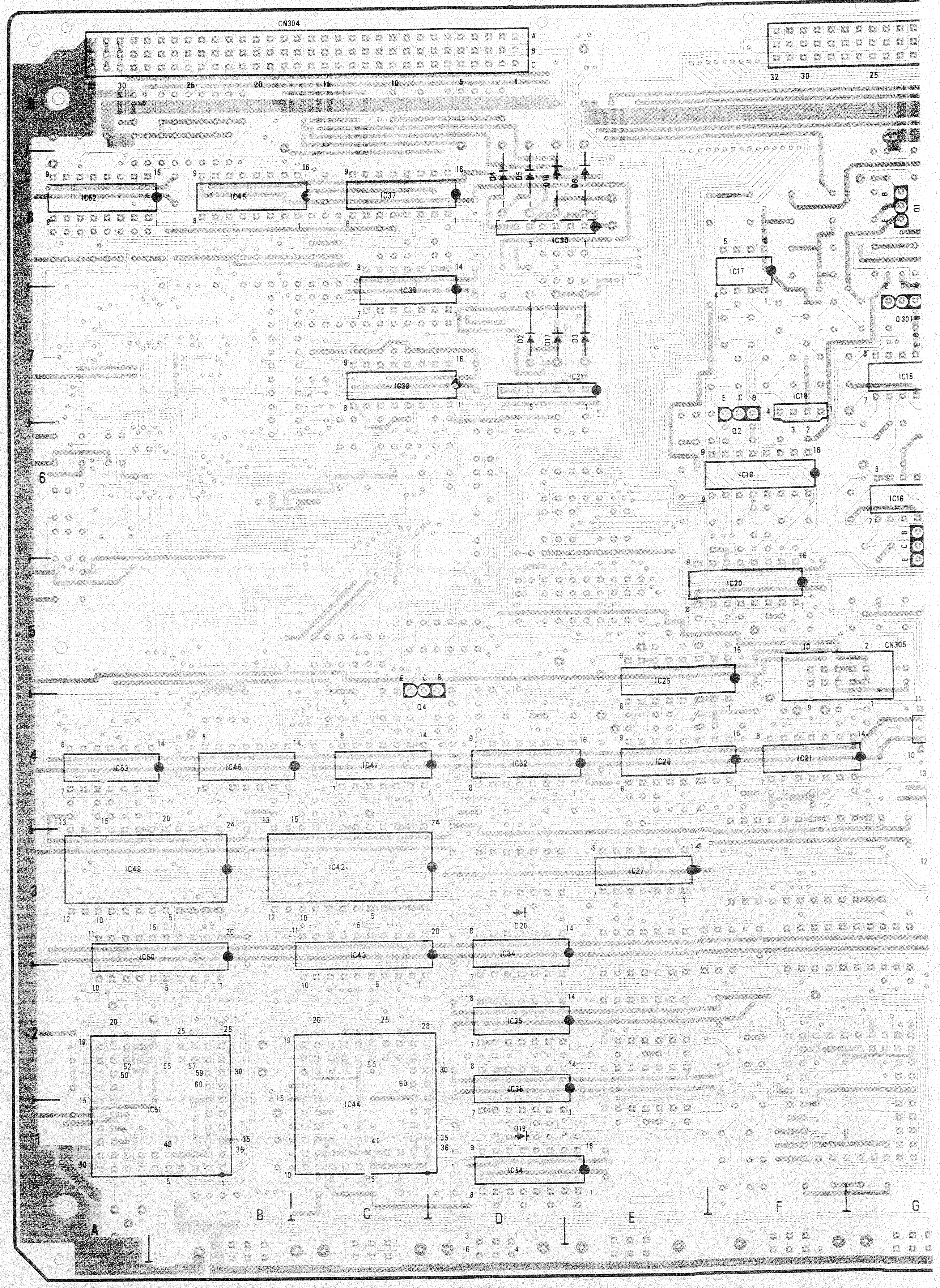
REF.No	TYPE	PIN NO.						
		UNREG +15V	UNREG +14V	+12V	+5V	GND	UNREG GND	−12V
IC 1	BX-343			13		7		
IC 2	LA7205				8	5		
IC 3	LA7205				8	5		
IC 4	μPD78312CW-607				64	32		
IC 5	TL082CP			8				4
*1 IC 6	TC4016BPHB				14	7		
IC 7	TL082CP			8				.4
IC 9	TLC548CP				8	4		
IC 10	SN74HC373N				20	10		
IC 11	SRM2016C10 ✻✻				24	12		
IC 15	TL084CN			4				11
IC 16	TL084CN			4				11
IC 17	TL082CP			8		4		
IC 18	AN608P			2		4		
IC 19	PA0009			4		6		10
IC 20	SN74LS123N				16	8		
IC 21	TC74HC04P				14	7		
IC 25	SN74LS123N				16	8		
IC 26	TC4050BP			1		8		
IC 27	TC74HC00P				14	7		
IC 30	TA7267P		7			4		
IC 31	TA7267P		7			4		
IC 32	TC4538BP				16	8		
IC 34	TC74HC32P				14	7		
IC 35	TC4001BP				14	7		
IC 36	μPD4013BC				16	8		
IC 37	M54532P	1.8					4.5.12.13	
IC 38	TC74HC08P				14	7		
IC 39	TC74HC4050P				1	8		
IC 40	CXD1095Q				26.58	10.27.42.57		
IC 41	TC74HC08P				14	7		
IC 42	SRM2016C10 ✻✻				24	12		
IC 43	TC74HC240P				20	10		
IC 44	CX-7913A				47.61	40.54		
IC 45	M54523P	9					8	
IC 46	CXD1095Q				26.58	10.27.42.57		
IC 47	CXD1095Q				26.58	10.27.42.57		
IC 48	TC74HC04P				14	7		
IC 49	SRM2016C10 ✻✻				24	12		
IC 50	TC74HC244P				20	10		
IC 51	CX-7912A				47.61	40.54		
IC 52	TC74HC4050P				1	8		
IC 53	μPD4013BC				14	7		
IC 54	TC74HC4538P				16	8		

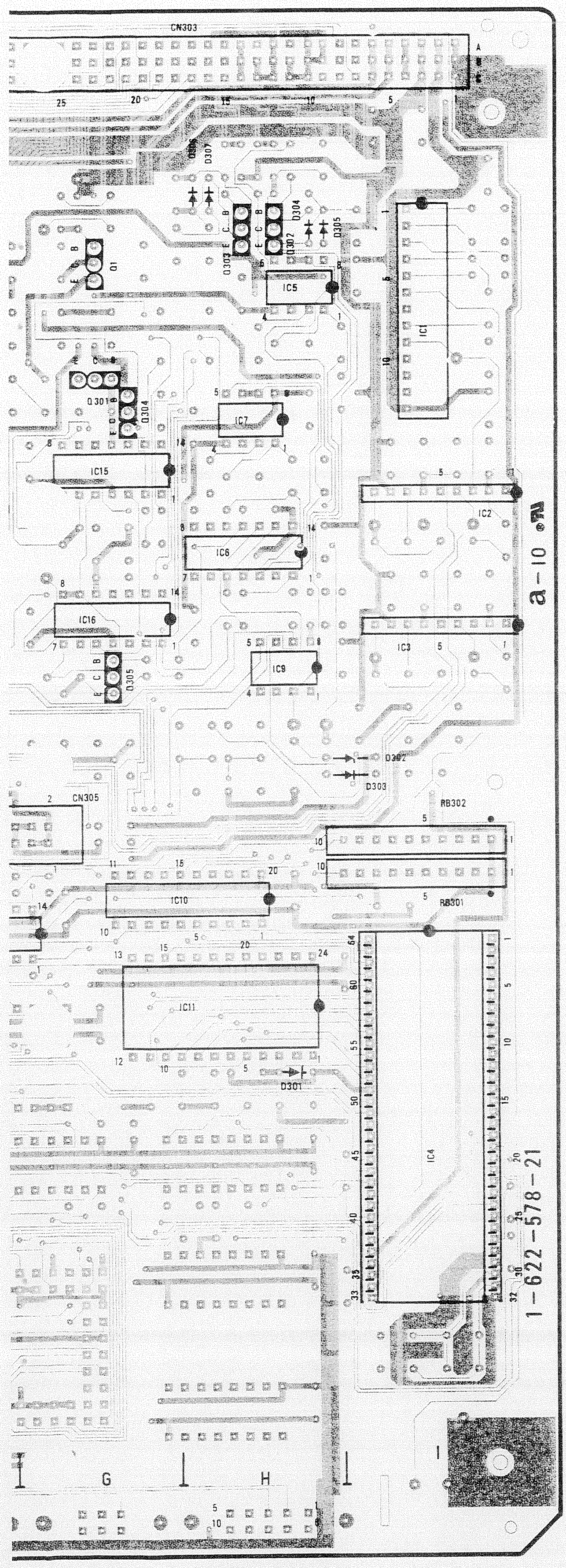
NOTE

MARK	CHANGE INFORMATION	SERIAL NO.
*1	IC6 TC4016BP → TC4016BPHB	S/N 10713 ~

SY-64AP (1-622-578-21)

CN303	H-9
CN304	C-9
CN305	F-5
D2	D-7
D3	E-7
D4	D-8
D5	D-8
D6	E-8
D17	D-7
D18	D-8
D19	D-1
D20	D-3
D301	H-3
D302	I-5
D303	I-5
D304	H-8
D305	H-8
D306	H-8
D307	H-8
E1	A-9
E2	A-1
E3	I-1
E4	I-6
E5	E-5
E6	G-8
E401	I-1
IC1	I-8
IC2	I-7
IC3	I-6
IC4	I-3
IC5	H-8
IC6	H-6
IC7	H-7
IC9	H-6
IC10	H-4
IC11	H-4
IC15	G-7
IC16	G-6
IC17	F-8
IC18	F-7
IC19	F-6
IC20	F-5
IC21	F-4
IC25	E-5
IC26	E-4
IC27	E-3
IC30	D-8
IC31	D-7
IC32	D-4
IC34	D-3
IC35	D-2
IC36	D-2
IC37	C-8
IC38	C-7
IC39	C-7
IC40	C-6
IC41	C-4
IC42	C-3
IC43	C-3
IC44	C-2
IC45	B-8
IC46	B-7
IC47	B-6
IC48	B-4
IC49	B-3
IC50	A-3
IC51	B-1
IC52	A-8
IC53	A-4
IC54	D-1
Q1	G-8
Q2	F-7
Q4	C-4
Q301	G-7
Q302	H-8
Q303	H-8
Q304	G-7
Q305	G-5
RV303	G-5
RV304	G-6
RV305	G-5
RV399	G-5
S1	H-1
S5	D-1
S301	H-8
S302	G-8
SL1	B-6
TP1	E-9
TP2	D-9
TP3	B-9
TP4	E-8
TP5	E-8
TP10	E-4
TP11	B-2
TP12	D-5
TP13	B-4
TP14	G-8
TP15	B-2
TP16	B-1
TP17	C-4
TP19	A-8
TP23	A-2
TP301	H-5
TP302	H-5
TP306	G-6
TP307	G-7
TP308	F-5
TP309	F-4
TP310	E-5
TP401	I-1
TP402	I-6
TP403	I-6
TP404	I-6
TP405	I-6
TP406	I-7
X1	F-1
X301	I-1

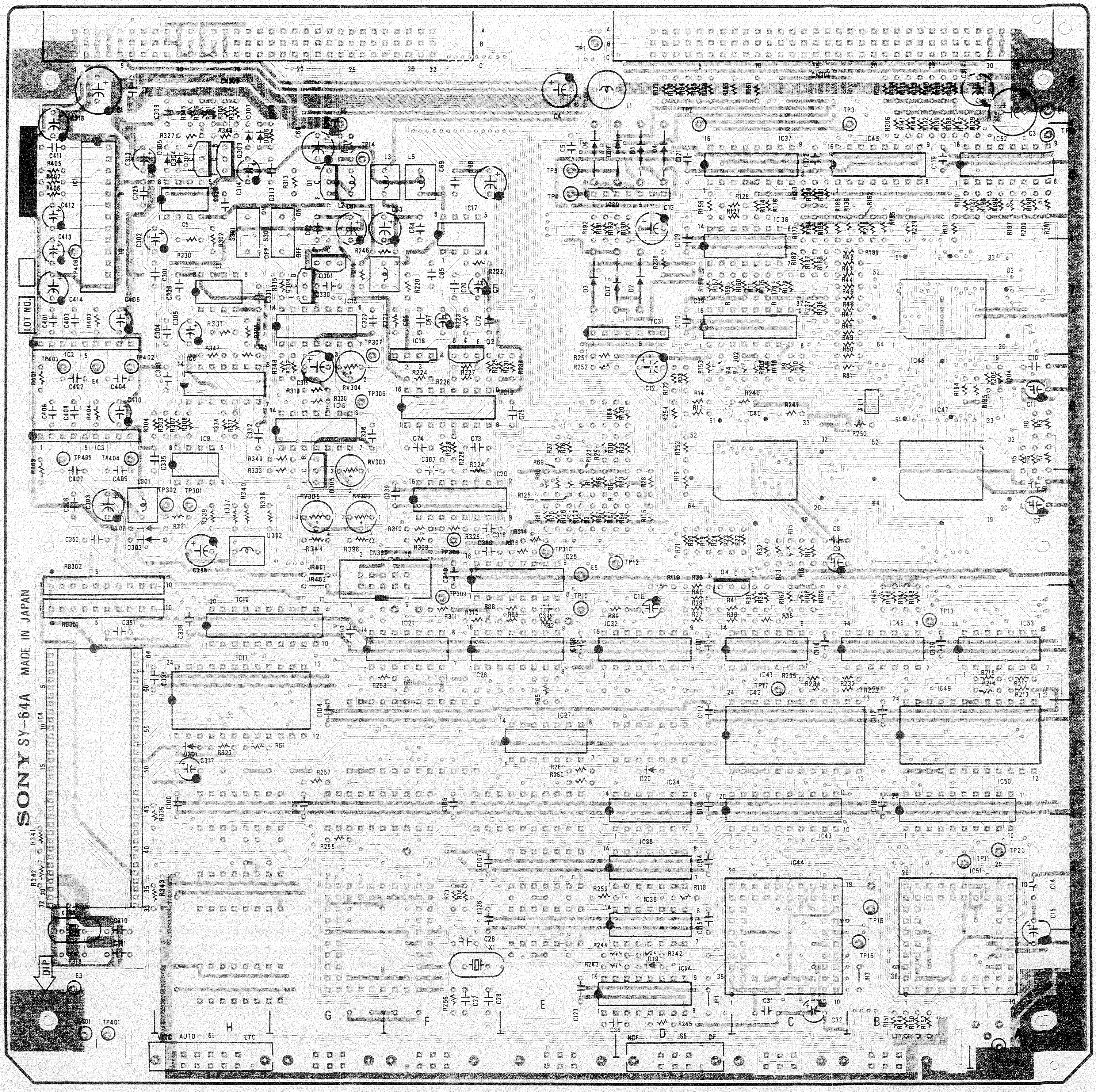



CN303
CN305
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC10
IC11
IC15
IC16
RB301
RB302
D301
D302
D303
a-10
1-622-578-21
G
H
I

SY-64AP — COMPONENT SIDE —

1-622-578-21
BVW-60P BVW-95P
BVW-65P

1R13


SONY SY-64A MADE IN JAPAN
LOT NO.
DIP
CN302
CN305
RB301
RB302
IC1
IC2
IC3
IC9
IC10
IC11
IC16
IC17
IC18
IC20
IC25
IC26
IC27
IC30
IC31
IC32
IC33
IC34
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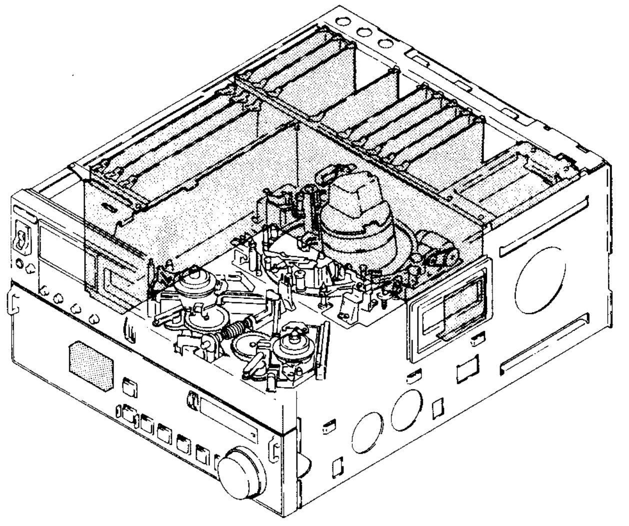
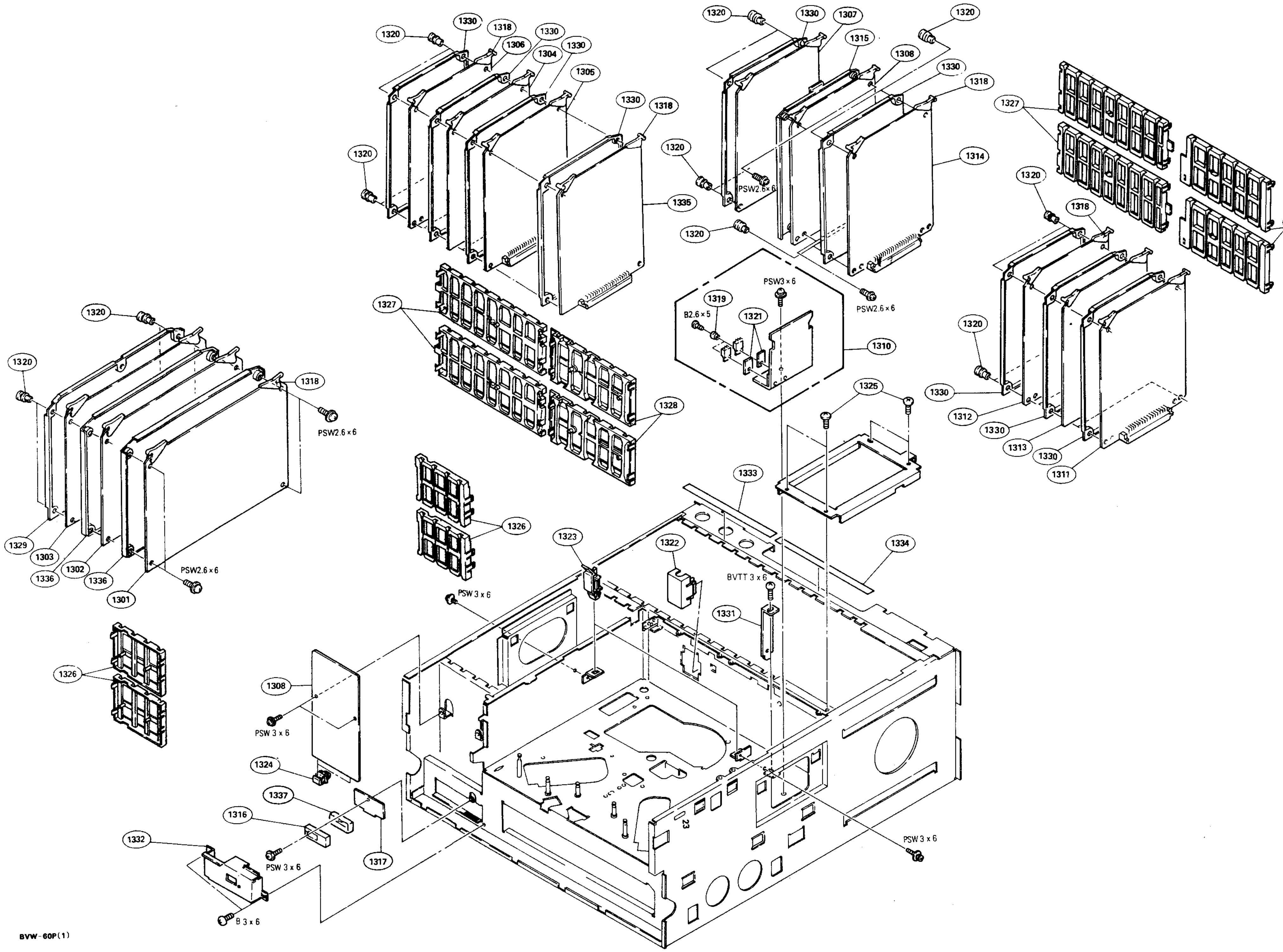
IC37
IC38
IC39
IC41
IC42
IC43
IC44
IC45
IC46
IC47
IC48
IC49
IC50
IC53
IC54
L1
L3
L5
X1
RV303
RV304
RV305
VTC AUTO S1 LTC
NDF D S5 DF
A
B
C
D
E
F
G
H
I

SY-64AP — SOLDERING SIDE —

1-622-578-21
BVW-60P BVW-95P
BVW-65P

Printed Circuit Block (1)

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1330
1307
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1308
1330
1318
1320
PSW2.6×6
1314
1320
1320
1319
PSW3×6
B2.6×5
1321
1310
PSW2.6×6
1327
1320
1318
1328
1320
1330
1312
1330
1313
1330
1311
1325
1333
1334
1320
1320
1318
PSW2.6×6
1329
1303
1336
1302
1336
1301
PSW2.6×6
1326
1326
1323
1322
BVTT 3×6
1331
PSW 3×6
1308
PSW 3×6
1324
1337
1316
1317
1332
PSW 3×6
B 3×6
PSW 3×6
BVW-60P(1)

No
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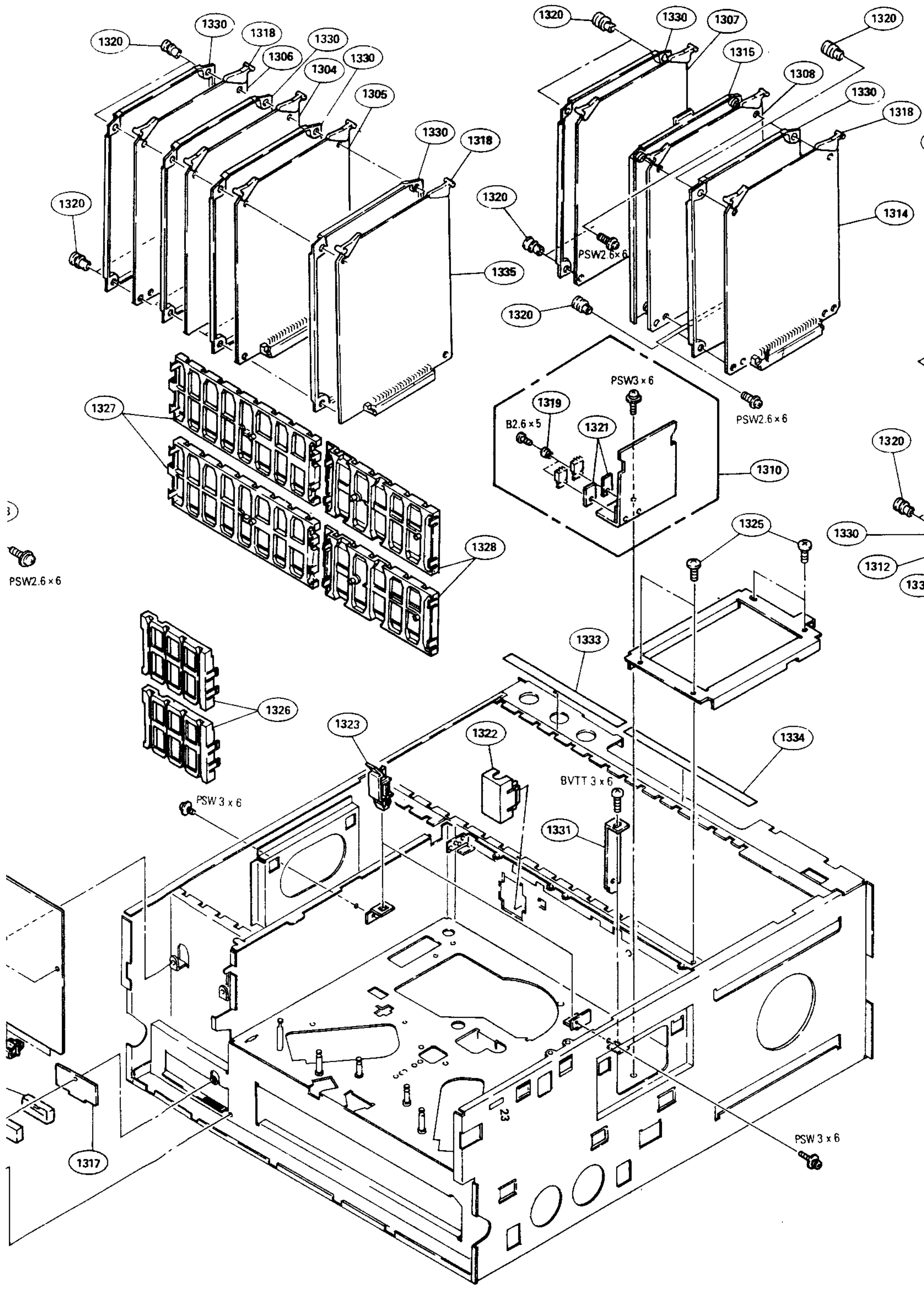
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1335
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1328
PSW2.6×6
1326
PSW 3×6
1323
1322
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1318
1314
1320
PSW2.6×6
1320
PSW3×6
1319
B2.6×5
1321
1310
PSW2.6×6
1325
1333
1334
BVTT 3×6
PSW 3×6
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1311

No.	Parts No.	SP	Description
1301	A-6711-904-B	o	MOUNTED CIRCUIT BOARD, DM-56P
1302	A-6711-888-A	o	MOUNTED CIRCUIT BOARD, TBC-7P (for S/N up to 10712)
**	A-6727-094-B	o	MOUNTED CIRCUIT BOARD, TBC-7E
1303	A-6711-889-C	o	MOUNTED CIRCUIT BOARD, TBC-8P (for S/N up to 10712)
	A-6727-078-A	o	MOUNTED CIRCUIT BOARD, TBC-12P (for S/N 10713 and higher)
1304	A-6711-891-A	o	MOUNTED CIRCUIT BOARD, EN-48P
1305	A-6711-953-A	o	MOUNTED CIRCUIT BOARD, VO-18AP
1306	A-6711-890-A	o	MOUNTED CIRCUIT BOARD, TBC-9P
1307	A-6713-914-A	o	MOUNTED CIRCUIT BOARD, AFM-1A
1308	A-6713-330-C	o	MOUNTED CIRCUIT BOARD, AU-118P
1309	A-6713-916-A	o	MOUNTED CIRCUIT BOARD, BF-28A
1310	A-6715-353-A	o	MOUNTED CIRCUIT BOARD, SE-57
1311	A-6715-386-A	o	MOUNTED CIRCUIT BOARD, SV-84P
1312	A-6715-394-A	o	MOUNTED CIRCUIT BOARD, SV-82A
1313	A-6715-403-A		MOUNTED CIRCUIT BOARD, SV-83B
1314	A-6717-488-A		MOUNTED CIRCUIT BOARD, TC-40AP
1315	X-3717-256-1	o	PLATE (S) ASS'Y, SHIELD, CARD
1316	1-548-152-11	o	HOURS METER, DIGITAL
1317	1-622-595-11	o	PRINTED CIRCUIT BOARD, HC-11
1318	2-251-622-11	s	LEVER, PC BOARD
1319	2-371-561-00	s	BUSHING (P), INSULATING
1320	3-531-576-01	s	RIVET
1321	3-660-978-00	s	SHEET, HEAT RESISTING
1322	3-677-741-00	o	GUARD, AIR
1323	3-682-047-01	o	HOLDER (A), PC BOARD
1324	3-703-072-00	o	HOLDER, PCB
1325	3-703-108-01	s	SCREW
1326	3-717-633-03	o	GUIDE P (M), PCB
1327	3-717-430-01	o	GUIDE (LL), PCB
1328	3-717-431-01	o	GUIDE (RL), PCB
1329	3-717-472-03	o	INSULATOR (M), CARD
1330	3-717-473-01	o	INSULATOR (S), CARD
1331	3-717-577-01	o	PROTECTOR, CASSETTE COMPARTMENT
1332	3-717-583-01	o	PLATE, INDICATION
1333	3-721-876-02	o	LABEL P (LL), PC BOARD
1334	3-725-067-01	o	LABEL (RL) (PB), PC BOARD
1335	A-6711-942-A	o	MOUNTED CIRCUIT BOARD, DEC-39A (for S/N up to 10622)
	A-6727-076-A	o	MOUNTED CIRCUIT BOARD, DEC-46AP (for S/N 10623 and higher)
1336	X-3717-255-1	o	PLATE (M) ASS'Y, SHIELD, CARD
1337	3-174-974-01	o	TIMER SHIELD CASE

	Ref.No.	Parts No.	SP	Description	
	Q216	8-729-202-38	s	2SC3326N	
	Q217	8-729-202-38	s	2SC3326N	
	Q218	8-729-220-91	s	2SK209-Y	
	Q219	8-729-901-01	s	DTC144EK	
	Q220	8-729-202-38	s	2SC3326N	
	Q309	8-729-901-06	s	DTA144EK	
	Q310	8-729-901-06	s	DTA144EK	
	Q311	8-729-901-06	s	DTA144EK	
	R113	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W	
	R114	1-216-678-11	s	METAL CHIP 13k 0.50% 1/10W	
	R144	1-216-691-11	s	METAL CHIP 47k 0.50% 1/10W	
	R145	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W	
	R146	1-216-101-00	s	METAL CHIP 150k 0.50% 1/10W	**
	R148	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W	
	R150	1-216-684-11	s	METAL CHIP 24k 0.50% 1/10W	
	R152	1-216-685-11	s	METAL CHIP 27k 0.50% 1/10W	**
	R153	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W	
	R157	1-216-681-11	s	METAL CHIP 18k 0.50% 1/10W	
1)	R166	1-216-697-11	s	METAL CHIP 82k 0.50% 1/10W	
2)	R166	1-216-698-11	s	METAL CHIP 91k 0.50% 1/10W	
	R167	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W	
	R168	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W	
	R183	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W	
	R185	1-216-699-11	s	METAL CHIP 100k 0.50% 1/10W	
	R188	1-216-694-11	s	METAL CHIP 62k 0.50% 1/10W	
	R190	1-216-658-11	s	METAL CHIP 2.0k 0.50% 1/10W	
	R191	1-216-294-00	s	METAL CHIP 10M 5% 1/8W	
	R192	1-216-294-00	s	METAL CHIP 10M 5% 1/8W	
	R194	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W	
	R213	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W	
	R244	1-216-691-11	s	METAL CHIP 47k 0.50% 1/10W	
	R245	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W	
	R246	1-216-691-11	s	METAL CHIP 47k 0.50% 1/10W	**
	R248	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W	
	R250	1-216-693-11	s	METAL CHIP 56k 0.50% 1/10W	
1)	R252	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W	
2)	R252	1-216-689-11	s	METAL CHIP 100k 0.50% 1/10W	**
	R253	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W	
1)	R255	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W	
2)	R255	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W	
	R257	1-216-681-11	s	METAL CHIP 18k 0.50% 1/10W	
	R266	1-216-698-11	s	METAL CHIP 91k 0.50% 1/10W	
	R267	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W	
	R268	1-216-633-11	s	METAL CHIP 180 0.50% 1/10W	
	R283	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W	
	R285	1-216-699-11	s	METAL CHIP 100k 0.50% 1/10W	
	R290	1-216-658-11	s	METAL CHIP 2k 0.50% 1/10W	
	R291	1-216-294-00	s	METAL CHIP 10M 5% 1/8W	
	R292	1-216-294-00	s	METAL CHIP 10M 5% 1/8W	
	R294	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W	
	RV110	1-237-522-21	s	VAR, CERMET 200k	
	RV111	1-237-517-21	s	VAR, CERMET 5k	
	RV112	1-237-518-21	s	VAR, CERMET 10k	
	RV113	1-237-517-21	s	VAR, CERMET 5k	
	RV114	1-237-516-21	s	VAR, CERMET 2k	
	RV210	1-237-522-21	s	VAR, CERMET 200k	
	RV211	1-237-517-21	s	VAR, CERMET 5k	
	RV212	1-237-518-21	s	VAR, CERMET 10k	
	RV213	1-237-517-21	s	VAR, CERMET 5k	
	RV214	1-237-516-21	s	VAR, CERMET 2k	

Ref.No.	Parts No.	SP	Description
S101	1-570-598-11	s	DIP
S202	1-570-598-11	s	DIP
SP101	1-564-947-11	s	PIN, SHORT
SP201	1-564-947-11	s	PIN, SHORT

BF-28A BOARD

Ref.No.	Parts No.	SP	Description
	A-6713-916-A	o	MOUNTED CIRCUIT BOARD, BF-28A
C101	1-124-236-00	s	ELECT 47 20% 10V
C102	1-124-236-00	s	ELECT 47 20% 10V
C201	1-124-236-00	s	ELECT 47 20% 10V
C202	1-124-236-00	s	ELECT 47 20% 10V
C301	1-124-236-00	s	ELECT 47 20% 10V
C302	1-124-236-00	s	ELECT 47 20% 10V
C401	1-124-236-00	s	ELECT 47 20% 10V
C402	1-124-236-00	s	ELECT 47 20% 10V
C501	1-124-462-00	s	ELECT 10 20% 16V
C502	1-124-257-11	s	ELECT 2.2 20% 50V
C503	1-124-257-11	s	ELECT 2.2 20% 50V
C505	1-124-462-00	s	ELECT 10 20% 16V
C506	1-135-100-21	s	TANTAL 6.8 20% 6.3V
C601	1-124-462-00	s	ELECT 10 20% 16V
C602	1-124-257-11	s	ELECT 2.2 20% 50V
C603	1-124-257-11	s	ELECT 2.2 20% 50V
C605	1-124-462-00	s	ELECT 10 20% 16V
C606	1-135-100-21	s	TANTAL 6.8 20% 6.3V
C701	1-124-462-00	s	ELECT 10 20% 16V
C702	1-124-257-11	s	ELECT 2.2 20% 50V
C703	1-124-257-11	s	ELECT 2.2 20% 50V
C705	1-124-462-00	s	ELECT 10 20% 16V
C706	1-135-100-21	s	TANTAL 6.8 20% 6.3V
C801	1-124-462-00	s	ELECT 10 20% 16V
C802	1-124-257-11	s	ELECT 2.2 20% 50V
C803	1-124-257-11	s	ELECT 2.2 20% 50V
C805	1-124-462-00	s	ELECT 10 20% 16V
C806	1-135-100-21	s	TANTAL 6.8 20% 6.3V
C901	1-124-236-00	s	ELECT 47 20% 10V
C902	1-124-236-00	s	ELECT 47 20% 10V
C903	1-124-229-00	s	ELECT 33 20% 6.3V
C904	1-124-229-00	s	ELECT 33 20% 6.3V
C905	1-124-229-00	s	ELECT 33 20% 6.3V
C906	1-124-229-00	s	ELECT 33 20% 6.3V
D501	8-719-101-23	s	1SS123
D502	8-719-101-23	s	1SS123
D503	8-719-100-05	s	1S2837
D505	8-719-101-23	s	1SS123
D506	8-719-101-23	s	1SS123
D601	8-719-101-23	s	1SS123
D602	8-719-101-23	s	1SS123
D603	8-719-100-05	s	1S2837
D605	8-719-101-23	s	1SS123
D606	8-719-101-23	s	1SS123

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
D704	8-719-109-94	s	RD6.2ES-B3
D801	8-719-101-23	s	1SS123
D802	8-719-101-23	s	1SS123
D901	8-719-101-23	s	1SS123
D902	8-719-101-23	s	1SS123
DL1	1-415-154-00	s	35ns
DL501	1-415-162-21	s	50ns
FB301	1-535-178-00	s	FERRITE BEAD
FB509	1-535-178-00	s	FERRITE BEAD
FB701	1-535-178-00	s	FERRITE BEAD
FB901	1-535-178-00	s	FERRITE BEAD
FB902	1-535-178-00	s	FERRITE BEAD
FB903	1-535-178-00	s	FERRITE BEAD
FB904	1-535-178-00	s	FERRITE BEAD
1) FL301	1-236-092-11	s	LOW-PASS 5.5MHz
2) FL301	1-236-092-12	s	LOW-PASS 5.5MHz
FL302	1-236-024-11	s	LOW-PASS 4.0MHz
FL303	1-235-321-11	s	LOW-PASS 1.5MHz
FL304	1-235-546-11	s	BAND ELIMINATE 4.43MHz
FL701	1-236-185-12	s	LOW-PASS (C)
IC1	8-752-015-81	s	CX20158 (SONY)
IC2	8-752-015-81	s	CX20158 (SONY)
IC3	8-759-112-53	s	uPC1663G (NEC)
IC4	8-759-112-53	s	uPC1663G (NEC)
IC5	8-752-015-81	s	CX20158 (SONY)
IC6	8-729-801-45	s	2SC3064-E
IC101	8-766-001-49	s	TX429M
IC102	8-759-969-13	s	SN16913P (TI)
IC103	8-759-700-43	s	NJM4558M (JRC)
IC104	1-464-602-31	s	CIRCUIT UNIT, HF
IC105	8-752-006-12	s	CX20061 (SONY)
IC201	8-759-700-95	s	NJM1496M (JRC)
IC202	8-759-908-17	s	TL082CPS (TI)
IC203	8-759-055-67	s	SN75107ANS-LS (TI) **
IC204	8-759-908-17	s	TL082CPS (TI)
IC205	8-759-208-11	s	TC4053BFHB (TOSHIBA)
14) IC207	8-741-109-80	s	BX1098 (SONY)
15) IC207	8-749-920-42	s	BX1098L (SONY)
IC301	8-759-012-00	s	MC10H116M (MOTOROLA)
IC302	8-759-001-98	s	MC10198L (MOTOROLA)
IC303	8-752-015-81	s	CX20158 (SONY)
IC304	8-752-015-81	s	CX20158 (SONY)
IC305	8-759-112-53	s	uPC1663G (NEC)
IC306	8-752-006-10	s	CX20061 (SONY)
IC403	8-752-015-81	s	CX20158 (SONY)
IC401	8-752-030-80	s	CXA1039M (SONY)
IC402	8-741-154-01	s	SBX1540-31 (SONY)
IC501	8-752-015-81	s	CX20158 (SONY)
IC502	8-759-112-53	s	uPC1663G (NEC)
IC503	8-752-015-81	s	CX20158 (SONY)
IC504	8-759-112-53	s	uPC1663G (NEC)
IC505	8-752-015-81	s	CX20158 (SONY)
IC506	8-729-801-45	s	2SC3064-E
IC507	8-759-969-13	s	SN16913P (TI)
IC508	8-759-700-43	s	NJM4558M (JRC)

Ref.No.	Parts No.	SP	Description
IC509	8-766-001-49	s	TX429M
IC601	8-759-700-95	s	NJM1496M (JRC)
IC602	8-759-908-17	s	TL082CPS (TI)
** IC603	8-759-055-67	s	SN75107ANS-LS (TI)
IC604	1-464-602-21	s	CIRCUIT UNIT, HF
IC605	8-752-006-10	s	CX20061 (SONY)
IC701	8-759-012-00	s	MC10H116M (MOTOROLA)
IC702	8-759-001-98	s	MC10198L (MOTOROLA)
IC703	8-759-112-53	s	uPC1663G (NEC)
IC704	8-752-015-81	s	CX20158 (SONY)
IC801	8-741-154-00	s	SBX1540-21 (SONY)
IC802	8-752-015-81	s	CX20158 (SONY)
IC901	8-759-205-39	s	TC74HC4049F (TOSHIBA)
IC902	8-759-205-39	s	TC74HC4049F (TOSHIBA)
IC903	8-759-204-98	s	TC74HC08F (TOSHIBA)
IC904	8-759-204-98	s	TC74HC08F (TOSHIBA)
IC905	8-759-205-40	s	TC74HC4050F (TOSHIBA)
IC906	8-759-204-98	s	TC74H008F (TOSHIBA)
IC907	8-759-941-17	s	SN74LS06NS (TI)
IC908	8-759-982-10	s	RC7809FA (RAYTHEON)
IC909	8-759-982-05	s	RC7805FA (RAYTHEON)
L1	1-410-482-31	s	MICRO 100
L2	1-410-482-31	s	MICRO 100
2) L3	1-410-470-11	s	MICRO 10
L4	1-410-482-31	s	MICRO 100
L5	1-410-482-31	s	MICRO 100
2) L6	1-410-470-11	s	MICRO 10
L7	1-410-482-31	s	MICRO 100
L8	1-410-482-31	s	MICRO 100
L10	1-410-482-31	s	MICRO 100
L11	1-410-466-21	s	MICRO 1.7
L101	1-410-482-31	s	MICRO 100
L102	1-410-482-31	s	MICRO 100
L103	1-410-482-31	s	MICRO 100
L105	1-410-470-11	s	MICRO 10
L106	1-410-470-11	s	MICRO 10
L107	1-410-464-11	s	MICRO 3.3
L109	1-410-473-11	s	MICRO 18
L111	1-410-482-31	s	MICRO 100
L201	1-410-482-31	s	MICRO 100
L202	1-410-504-11	s	MICRO 3.9
L203	1-410-482-31	s	MICRO 100
L204	1-410-482-31	s	MICRO 100
L205	1-410-482-31	s	MICRO 100
L206	1-410-482-31	s	MICRO 100
L301	1-410-482-11	s	MICRO 100
L303	1-410-482-31	s	MICRO 100
L304	1-410-482-31	s	MICRO 100
L305	1-410-482-31	s	MICRO 100
L307	1-410-482-31	s	MICRO 100
L308	1-410-482-31	s	MICRO 100
L309	1-410-482-31	s	MICRO 100
L310	1-410-482-31	s	MICRO 100
L311	1-410-478-11	s	MICRO 47
L401	1-410-482-31	s	MICRO 100
L402	1-410-482-31	s	MICRO 100
L403	1-410-482-31	s	MICRO 100
L406	1-410-461-41	s	MICRO 1.8
L407	1-410-482-31	s	MICRO 100
L408	1-410-478-11	s	MICRO 47
L409	1-410-482-31	s	MICRO 100
L410	1-410-482-31	s	MICRO 100

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
Q1	8-729-104-51	s	2SC1009A
Q2	8-729-104-51	s	2SC1009A
R1	1-216-651-11	s	METAL CHIP 10k 0.50% 1/10W
R2	1-216-650-11	s	METAL CHIP 910 0.50% 1/10W
R3	1-216-651-11	s	METAL CHIP 10k 0.50% 1/10W
RV1	1-228-457-11	s	VAR, CERMET 2k

2) DUS-270 BOARD

All the component parts on the DUS-270 board are supplied together when you order the VO-18AP board.

Ref.No.	Parts No.	SP	Description
C655	1-126-157-11	s	ELECT 10 20% 16V
Q607	8-729-100-66	s	2SC1623
Q608	8-729-100-66	s	2SC1623

13) DUS-288 BOARD

All the component parts on the DUS-288 board are supplied together when you order the DM-56P board.

Ref.No.	Parts No.	SP	Description
	1-628-943-11	o	PRINTED CIRCUIT BOARD, DUS-288
C1	1-163-241-00	s	CERAMIC CHIP 39pF 5% 50V
CN1	1-566-473-11	o	PIN, SOCKET 1P
CN2	1-566-473-11	o	PIN, SOCKET 1P
CV1	1-141-260-00	s	TRIMMER, CERAMIC 30pF
Q1	8-729-109-43	s	2SK94-X3
R1	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W

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DUS-570 BOARD

Ref.No.	Parts No.	SP	Description
	1-644-751-11	o	PRINTED CIRCUIT BOARD, DUS-570
C401	1-163-038-00	s	CAP,CHIP CERAMIC 0.1 25V
C402	1-163-031-11	s	CAP,CHIP CERAMIC 0.01 50V
C403	1-126-394-11	s	CAP,CHIP ELECT 10 16V
C404	1-163-227-11	s	CAP,CHIP CERAMIC 10 50V
IC401	8-759-981-58	s	RC2043MD (RAYTHEON)

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EN-48P BOARD

Ref.No.	Parts No.	SP	Description
	A-6711-891-A	o	MOUNTED CIRCUIT BOARD, EN-48P
C6	1-124-584-00	s	ELECT 100 20% 10V
C8	1-124-584-00	s	ELECT 100 20% 10V
C12	1-124-222-00	s	ELECT 22 20% 6.3V
C13	1-124-462-00	s	ELECT 10 20% 6.3V
C14	1-124-584-00	s	ELECT 100 20% 10V
C16	1-124-584-00	s	ELECT 100 20% 10V
C21	1-124-584-00	s	ELECT 100 20% 10V
C22	1-124-584-00	s	ELECT 100 20% 10V
C41	1-162-886-21	s	CERAMIC 390pF 5% 50V
C43	1-124-236-00	s	ELECT 47 20% 10V
C46	1-124-236-00	s	ELECT 47 20% 10V
C48	1-124-236-00	s	ELECT 47 20% 10V
C51	1-124-584-00	s	ELECT 100 20% 10V
C53	1-124-584-00	s	ELECT 100 20% 10V
C55	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C56	1-124-236-00	s	ELECT 47 20% 16V
C59	1-124-236-00	s	ELECT 47 20% 16V
C61	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C64	1-162-880-21	s	CERAMIC 120pF 5% 50V
C68	1-124-584-00	s	ELECT 100 20% 10V
C70	1-124-236-00	s	ELECT 47 20% 10V
C71	1-162-877-21	s	CERAMIC 82pF 5% 50V
C72	1-107-158-51	s	MICA SILVED 30pF 5% 500V
C77	1-124-584-00	s	ELECT 100 20% 10V
C81	1-124-584-00	s	ELECT 100 20% 10V
C85	1-124-236-00	s	ELECT 47 20% 10V
C86	1-162-886-21	s	CERAMIC 390pF 5% 50V
C89	1-161-463-00	s	CERAMIC 220pF 5% 50V
C92	1-124-584-00	s	ELECT 100 20% 10V
C94	1-131-371-00	s	TANTAL 10 20% 16V
C95	1-131-371-00	s	TANTAL 10 20% 16V
C101	1-131-371-00	s	TANTAL 10 20% 16V
C102	1-131-371-00	s	TANTAL 10 20% 16V
C111	1-124-584-00	s	ELECT 100 20% 10V
C112	1-124-225-00	s	ELECT 100 20% 6.3V
C115	1-124-584-00	s	ELECT 100 20% 10V
C117	1-124-584-00	s	ELECT 100 20% 10V
C118	1-124-225-00	s	ELECT 100 20% 6.3V
C126	1-124-584-00	s	ELECT 100 20% 10V
C130	1-124-584-00	s	ELECT 100 20% 10V
C134	1-124-225-00	s	ELECT 100 20% 6.3V
C203	1-124-584-00	s	ELECT 100 20% 10V
C204	1-124-584-00	s	ELECT 100 20% 10V
C214	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C216	1-163-033-00	s	CERAMIC CHIP 0.022 50V
2) C350	1-124-584-00	s	ELECT 100 20% 10V
2) C357	1-124-584-00	s	ELECT 100 20% 10V
C400	1-124-225-00	s	ELECT 100 20% 6.3V
C503	1-124-462-00	s	ELECT 10 20% 6.3V
C506	1-124-584-00	s	ELECT 100 20% 10V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

20) NR-32 BOARD

All the component parts on the NR-32 board are supplied together when you order the TBC-12P board.

Ref.No.	Parts No.	SP	Description
	1-629-463-11	o	PRINTED CIRCUIT BOARD, NR-32
C701	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C702	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C703	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C704	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C705	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C706	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C707	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C708	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C709	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C710	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C712	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C713	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C714	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C715	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C716	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C717	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C720	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C721	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C722	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C723	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C724	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C725	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C727	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C729	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C730	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
CP701	1-577-597-11	s	CRYSTAL VCO 27MHz **
CP702	1-577-134-11	s	CRYSTAL VCO 13.5MHz
CV701	1-141-320-00	s	TRIMMER, CERAMIC 45pF
IC701	8-759-947-00	s	CXD1328Q (SONY)
IC702	8-752-322-72	s	CXK1202S (SONY)
IC703	8-752-322-72	s	CXK1202S (SONY)
IC704	8-752-322-72	s	CXK1202S (SONY)
IC705	8-759-205-16	s	TC74HC161F (TOSHIBA)
IC706	8-759-205-16	s	TC74HC161F (TOSHIBA)
IC707	8-759-205-22	s	TC74HC240F (TOSHIBA)
IC708	8-759-203-21	s	TC74HC273P (TOSHIBA)
IC709	8-759-205-16	s	TC74HC161P (TOSHIBA)
IC710	8-752-306-51	s	CX23065A (TOSHIBA)
IC711	8-752-306-51	s	CX23065A (TOSHIBA)
IC712	8-759-904-80	s	74F04PC (FSC)
IC713	8-759-904-84	s	74F74PC (FSC)
IC714	8-759-230-23	s	CXD1045AQ (SONY)
IC715	8-759-230-23	s	CXD1045AQ (SONY)
IC716	8-759-907-81	s	SN74LS221NS (TI)
IC717	8-759-904-83	s	74F32PC (FSC)
IC718	8-759-906-71	s	74F175PC (FSC)
IC719	8-759-915-93	s	74F163APC (FSC)
IC720	8-759-925-90	s	SN74HC74NS (TI)
IC721	8-759-930-57	s	SN74LS164NS (TI)
IC725	8-759-901-58	s	SN74LS158N (TI)
IC726	8-759-930-57	s	SN74LS164NS (TI)
R748	1-216-665-11	s	METAL CHIP 3.9k 0.50% 1/10W
R749	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
RV701	1-230-521-11	s	VAR, METAL 2.2k
RV702	1-230-521-11	s	VAR, METAL 2.2k

3) PC-32 BOARD

Ref.No.	Parts No.	SP	Description
	1-622-603-11	o	PRINTED CIRCUIT BOARD, PC-32
D1	8-719-800-81	s	TLP801A

PC-33 BOARD

Ref.No.	Parts No.	SP	Description
	1-622-604-11	o	PRINTED CIRCUIT BOARD, PC-33
D1	8-719-800-81	s	TLP801A

PC-41 BOARD

Ref.No.	Parts No.	SP	Description
	1-623-267-11	o	PRINTED CIRCUIT BOARD, PC-41
D1	8-719-800-81	s	TLP801A

4) PC-47 BOARD

Ref.No.	Parts No.	SP	Description
	1-628-786-11	o	PRINTED CIRCUIT BOARD, PC-47
D1	8-719-800-81	s	TLP801A

PD-35 BOARD

Ref.No.	Parts No.	SP	Description
	1-622-596-11	o	PRINTED CIRCUIT BOARD,PD-35
CN852	1-508-900-00	o	PIN 2P

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

SY-61A BOARD

Ref.No.	Parts No.	SP	Description
IC6	8-759-736-29	s	C256A-BVW60P V2.00 SY1
IC39	8-759-736-30	s	C512-BVW60P V2.00 SY2
12)	A-6717-476-A	o	MOUNTED CIRCUIT BOARD, SY-61A
13)	A-6717-476-B	o	MOUNTED CIRCUIT BOARD, SY-61A
C1	1-124-236-00	s	ELECT 47 20% 10V
C3	1-126-103-11	s	ELECT 470 20% 16V
C5	1-126-103-11	s	ELECT 470 20% 16V
C101	1-124-462-00	s	ELECT 10 20% 16V
C107	1-162-720-11	s	CERAMIC 270pF 50V
C108	1-124-234-00	s	ELECT 22 20% 16V
C111	1-162-887-11	s	CERAMIC 470pF 5% 50V
C201	1-124-462-00	s	ELECT 10 20% 16V
C209	1-107-169-00	s	MICA 100pF 5% 500V
C210	1-107-169-00	s	MICA 100pF 5% 500V
C212	1-123-611-00	s	ELECT 1 20% 50V
C213	1-123-611-00	s	ELECT 1 20% 50V
C301	1-131-347-00	s	TANTAL 1 10% 35V
C302	1-102-114-00	s	CERAMIC 470pF 10% 50V
C305	1-124-462-00	s	ELECT 10 20% 16V
C309	1-102-106-00	s	CERAMIC 100pF 10% 50V
5) CN301	1-506-748-31	s	DIN 96P
6) CN301	1-506-748-11	s	DIN 96P
5) CN302	1-506-748-31	s	DIN 96P
6) CN302	1-506-748-11	s	DIN 96P
CV101	1-141-297-11	s	TRIMMER, CERAMIC 90pF
CV102	1-141-260-00	s	TRIMMER, CERAMIC 30pF
D101	8-719-800-60	s	TLR214
D102	8-719-911-19	s	1SS119
D103	8-719-911-19	s	1SS119
D104	8-719-911-19	s	1SS119
D201	8-719-911-19	s	1SS119
D202	8-719-911-19	s	1SS119
D203	8-719-911-19	s	1SS119
D204	8-719-911-19	s	1SS119
D205	8-719-911-19	s	1SS119
D206	8-719-911-19	s	1SS119
D301	8-719-911-19	s	1SS119
D302	8-719-911-19	s	1SS119
D303	8-719-911-19	s	1SS119
IC1	8-759-902-44	s	SN74LS244N (TI)
IC2	8-759-902-45	s	SN74LS245N (TI)
IC3	8-759-902-44	s	SN74LS244N (TI)
IC4	8-759-942-12	s	MBM2212-25P (FUJITSU)

Ref.No.	Parts No.	SP	Description
** IC5	8-759-057-02	s	SRM2016C10 (SEIKO EPSON)
IC7	8-759-208-86	s	TMPZ84C011AF (TOSHIBA)
IC8	8-759-202-13	s	TC74HCU04P (TOSHIBA)
IC9	8-759-600-61	s	M54529AP (MITSUBISHI)
IC10	8-759-202-16	s	TC74HC11P (TOSHIBA)
IC11	8-759-202-26	s	TC74HC138P (TOSHIBA)
IC12	8-759-202-26	s	TC74HC138P (TOSHIBA)
IC13	8-759-202-17	s	TC74HC14P (TOSHIBA)
IC14	8-759-240-50	s	TC4050BP (TOSHIBA)
12) IC15	8-759-240-53	s	TC4053BP (TOSHIBA)
13) IC15	8-759-208-10	s	TC4053BFHB (TOSHIBA)
IC16	8-759-203-52	s	TC74HC595P (TOSHIBA)
IC17	8-759-004-84	s	MC74HC597N (MOTOROLA)
IC18	8-759-278-05	s	NJM78L05A (JRC)
IC19	8-759-908-23	s	MB88303 (FUJITSU)
IC20	8-759-926-30	s	AM26LS30PC (AMD)
IC21	8-759-202-27	s	TC74HC157P (TOSHIBA)
IC22	8-759-202-27	s	TC74HC157P (TOSHIBA)
** IC23	8-759-057-02	s	SRM2016C10 (SEIKO EPSON)
IC24	8-759-202-13	s	TC74HCU04P (TOSHIBA)
IC25	8-759-729-03	s	NJM2903D (JRC)
IC26	8-759-008-57	s	MC34051P (MOTOROLA)
IC27	8-759-208-86	s	TMPZ84C011AF (TOSHIBA)
IC28	8-759-202-56	s	TC74HC245P (TOSHIBA)
IC29	8-759-202-56	s	TC74HC245P (TOSHIBA)
IC30	8-759-916-82	s	LH0082AD (SHARP)
IC31	8-759-600-61	s	M54529AP (MITSUBISHI)
IC32	8-759-600-61	s	M54529AP (MITSUBISHI)
IC33	8-759-207-73	s	TC4030BPHB (TOSHIBA)
IC34	8-759-202-14	s	TC74HC08P (TOSHIBA)
IC35	8-759-906-97	s	SN74LS697N (TI)
IC36	8-759-906-97	s	SN74LS697N (TI)
IC37	8-759-600-61	s	M54529AP (MITSUBISHI)
IC38	8-759-938-68	s	CXD1095Q (SONY)
IC40	8-752-331-08	s	CXK5864BP-12L (SONY)
IC41	8-759-916-84	s	LH0084A (SHARP)
IC42	8-759-202-21	s	TC74HC32P (TOSHIBA)
IC43	8-759-202-21	s	TC74HC32P (TOSHIBA)
IC44	8-759-202-11	s	TC74HC00P (TOSHIBA)
IC45	8-759-603-32	s	M51958BL (MITSUBISHI)
IC46	8-759-202-14	s	TC74HC08P (TOSHIBA)
IC47	8-759-045-38	s	MC14538BCP (MOTOROLA)
IC48	8-759-240-69	s	TC4069UBP (TOSHIBA)
IC49	8-759-001-14	s	MC74HC58N (MOTOROLA)
IC50	8-759-202-21	s	TC74HC32P (TOSHIBA)
IC51	8-759-202-13	s	TC74HCU04P (TOSHIBA)
IC52	8-759-202-89	s	TC74HC139P (TOSHIBA)
IC53	8-759-202-12	s	TC74HC02P (TOSHIBA)
L1	1-459-155-00	s	45 (WITH CORE)
16) R247	1-217-666-31	s	SHORT 0.01 1/6W
R290	1-247-881-00	s	CARBON 120k 5% 1/4W
R307	1-247-887-00	s	CARBON 220k 5% 1/4W
R315	1-247-887-00	s	CARBON 220k 5% 1/4W
S101	1-570-707-11	s	SLIDE
S102	1-553-812-00	s	PUSH
S103	1-553-812-00	s	PUSH
S105	1-553-812-00	s	PUSH
S106	1-552-509-00	s	DIP

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Ref.No.	Parts No.	SP	Description
S202	1-570-707-11	s	SLIDE
S203	1-570-623-11	s	DIP
S204	1-570-623-11	s	DIP
S206	1-553-812-00	s	PUSH
S302	1-552-509-00	s	DIP
X1	1-567-132-00	s	VIBRATOR 8.00MHz
X2	1-567-870-11	s	VIBRATOR 614.00kHz

SY-64AP BOARD

Ref.No.	Parts No.	SP	Description
	A-6717-487-A	o	MOUNTED CIRCUIT BOARD, SY-64AP
C1	1-126-103-11	s	ELECT 470 20% 16V
C3	1-124-135-00	s	ELECT 470 20% 6.3V
C4	1-124-455-00	s	ELECT 100 20% 16V
C7	1-124-462-00	s	ELECT 10 20% 16V
C9	1-124-462-00	s	ELECT 10 20% 16V
C11	1-124-462-00	s	ELECT 10 20% 16V
C12	1-124-242-00	s	ELECT 33 20% 25V
C13	1-124-242-00	s	ELECT 33 20% 25V
C15	1-124-462-00	s	ELECT 10 20% 16V
C16	1-123-611-00	s	ELECT 1 20% 50V
C27	1-102-951-11	s	CERAMIC 15pF 50V
C28	1-102-947-00	s	CERAMIC 10pF 50V
C32	1-124-462-00	s	ELECT 10 20% 16V
C61	1-124-236-00	s	ELECT 47 20% 16V
C63	1-124-236-00	s	ELECT 47 20% 16V
C65	1-161-463-00	s	CERAMIC 220pF 5% 50V
C66	1-161-463-00	s	CERAMIC 220pF 5% 50V
C67	1-124-462-00	s	ELECT 10 20% 16V
C68	1-124-236-00	s	ELECT 47 20% 16V
C71	1-124-465-00	s	ELECT 0.47 20% 50V
C72	1-162-889-11	s	CERAMIC 680pF 5% 50V
C74	1-161-463-00	s	CERAMIC 220pF 5% 50V
C75	1-102-106-00	s	CERAMIC 100pF 10% 50V
C302	1-124-462-00	s	ELECT 10 20% 16V
C305	1-124-462-00	s	ELECT 10 20% 16V
C309	1-162-880-11	s	CERAMIC 120pF 5% 50V
C310	1-102-947-00	s	CERAMIC 10pF 50V
C311	1-102-947-00	s	CERAMIC 10pF 50V
C312	1-124-462-00	s	ELECT 10 20% 16V
C313	1-162-880-11	s	CERAMIC 120pF 5% 50V
C314	1-124-462-00	s	ELECT 10 20% 16V
C315	1-124-236-00	s	ELECT 47 20% 16V
C316	1-162-880-11	s	CERAMIC 120pF 5% 50V
9) C317	1-124-247-00	s	ELECT 10 20% 25V
C318	1-124-236-00	s	ELECT 47 20% 16V
C319	1-124-236-00	s	ELECT 47 20% 16V
C352	1-102-106-00	s	CERAMIC 100pF 10% 50V
C401	1-129-794-00	s	FILM 0.0033 5% 100V
C404	1-162-887-11	s	CERAMIC 470pF 5% 50V
C405	1-124-224-00	s	ELECT 47 20% 6.3V
C406	1-130-726-00	s	FILM 0.0015 5% 100V
C409	1-162-885-11	s	CERAMIC 330pF 5% 50V
C410	1-124-224-00	s	ELECT 47 20% 6.3V
C412	1-123-611-00	s	ELECT 1 20% 50V
C413	1-124-257-00	s	ELECT 2.2 20% 50V

Ref.No.	Parts No.	SP	Description
C414	1-124-236-00	s	ELECT 47 20% 16V
CN303	1-568-144-11	s	DIN 96P
CN304	1-568-144-11	s	DIN 96P
CN305	1-566-311-11	s	DIN 10P
D2	8-719-200-02	s	10E2
D3	8-719-200-02	s	10E2
D4	8-719-200-02	s	10E2
D5	8-719-200-02	s	10E2
D6	8-719-200-02	s	10E2
D17	8-719-200-02	s	10E2
D18	8-719-200-02	s	10E2
D19	8-719-911-19	s	1SS119
D20	8-719-911-19	s	1SS119
9) D301	8-719-911-19	s	1SS119
D302	8-719-101-97	s	1SS97-1
D303	8-719-101-97	s	1SS97-1
D304	8-719-911-19	s	1SS119
D305	8-719-911-19	s	1SS119
D306	8-719-911-19	s	1SS119
D307	8-719-911-19	s	1SS119
IC1	8-743-430-00	s	BX343 (SONY)
IC2	8-759-800-72	s	LA7205 (SANYO)
IC3	8-759-800-72	s	LA7205 (SANYO)
IC4	8-759-114-14	s	uPD78312CW-608 (NEC)
IC5	8-759-990-82	s	TL082CP (TI)
IC6	8-759-208-12	s	TC4016BPHB (TOSHIBA)
IC7	8-759-990-82	s	TL082CP (TI)
IC9	8-759-942-18	s	TLC548CP (TI)
IC10	8-759-203-35	s	TC74HC373P (TOSHIBA)
** IC11	8-759-057-02	s	SRM2016C10 (SEIKO EPSON)
IC15	8-759-990-84	s	TL084CN (TI)
IC16	8-759-990-84	s	TL084CN (TI)
IC17	8-759-990-82	s	TL082CP (TI)
IC18	8-759-400-06	s	AN608P (MATSUSHITA)
IC19	8-759-912-64	s	PA0009 (PIONEER)
IC20	8-759-901-23	s	SN74LS123N (TI)
IC21	8-759-202-74	s	TC74HC04P (TOSHIBA)
IC25	8-759-901-23	s	SN74LS123N (TI)
IC26	8-759-240-50	s	TC4050BP (TOSHIBA)
IC27	8-759-202-11	s	TC74HC00P (TOSHIBA)
IC30	8-759-234-04	s	TA7267BP (TOSHIBA)
IC31	8-759-234-04	s	TA7267BP (TOSHIBA)
IC32	8-759-245-38	s	TC4538BP (TOSHIBA)
IC34	8-759-202-21	s	TC74HC32P (TOSHIBA)
IC35	8-759-240-01	s	TC4001BP (TOSHIBA)
IC36	8-759-340-13	s	HD14013BP (TOSHIBA)
IC37	8-759-600-34	s	M54532P (MITSUBISHI)
IC38	8-759-202-14	s	TC74HC08P (TOSHIBA)
IC39	8-759-202-37	s	TC74HC4050P (TOSHIBA)
IC40	8-759-938-68	s	CXD1095Q (SONY)

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Ref.No.	Parts No.	SP	Description
IC41	8-759-202-14	s	TC74HC08P (TOSHIBA)
**IC42	8-759-057-02	s	SRM2016C10 (SEIKO EPSON)
IC43	8-759-202-33	s	TC74HC240P (TOSHIBA)
IC44	8-759-910-76	s	CX7913A (SONY)
IC45	8-759-645-23	s	M54523P (MITSUBISHI)
IC46	8-759-938-68	s	CXD1095Q (SONY)
IC47	8-759-938-68	s	CXD1095Q (SONY)
IC48	8-759-202-74	s	TC74HC04P (TOSHIBA)
**IC49	8-759-057-02	s	SRM2016C10 (SEIKO EPSON)
IC50	8-759-202-55	s	TC74HC244P (TOSHIBA)
IC51	8-759-909-72	s	CX7912A (SONY)
IC52	8-759-202-37	s	TC74HC4050P (TOSHIBA)
IC53	8-759-340-13	s	HD14013BP (TOSHIBA)
IC54	8-759-203-83	s	TC74HC4538P (TOSHIBA)
L1	1-412-533-11	s	MICRO 47
L301	1-410-482-31	s	MICRO 100
L302	1-410-482-31	s	MICRO 100
Q1	8-729-600-27	s	2SC634SP
Q2	8-729-117-54	s	2SA1175
Q4	8-729-600-27	s	2SC634SP
Q301	8-729-600-27	s	2SC634SP
Q302	8-729-201-05	s	2SC2878-B
Q303	8-729-201-05	s	2SC2878-B
Q304	8-729-201-05	s	2SC2878-B
Q305	8-729-201-05	s	2SC2878-B
R73	1-247-903-00	s	CARBON 1M 5% 1/4W
R301	1-247-903-00	s	CARBON 1M 5% 1/4W
R305	1-247-903-00	s	CARBON 1M 5% 1/4W
R318	1-247-903-00	s	CARBON 1M 5% 1/4W
R411	1-217-666-31	s	SHORT 0.01 1/6W
R412	1-217-666-31	s	SHORT 0.01 1/6W
R413	1-217-666-31	s	SHORT 0.01 1/6W
RB301	1-231-387-00	s	NETTY
RB302	1-231-387-00	s	NETTY
RV303	1-237-521-21	s	VAR, CERMET 100k
RV304	1-237-521-21	s	VAR, CERMET 100k
RV305	1-237-521-21	s	VAR, CERMET 100k
RV399	1-237-521-21	s	VAR, CERMET 100k
S1	1-571-060-11	s	SLIDE
S301	1-552-509-00	s	DIP
S302	1-552-509-00	s	DIP
X1	1-567-867-11	s	OSCILLATOR 14.500MHz
X301	1-527-828-00	s	OSCILLATOR 12.000MHz

20) TBC-7D BOARD

Ref.No.	Parts No.	SP	Description
	A-6727-094-A	o	MOUNTED CIRCUIT BOARD, TBC-7D
C100	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C102	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C103	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C105	1-135-076-21	s	TANTAL 1 10% 35V
C108	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C110	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C111	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C115	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C121	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C124	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C125	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C126	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C128	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C130	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C135	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C205	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C206	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C209	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C211	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C213	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C217	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C219	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C221	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C225	1-162-568-11	s	CERAMIC CHIP 0.33 25V
C226	1-162-638-11	s	CERAMIC CHIP 1 16V
C227	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C228	1-162-568-11	s	CERAMIC CHIP 0.33 25V
C229	1-162-638-11	s	CERAMIC CHIP 1 16V
C231	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C234	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C236	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C242	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C243	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C245	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C246	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C248	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C253	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C254	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C255	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C259	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C263	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C265	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C270	1-162-638-11	s	CERAMIC CHIP 1 16V
C271	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C273	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C276	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C277	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C281	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C284	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C288	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C290	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C291	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C293	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C295	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C302	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V

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Ref.No.	Parts No.	SP	Description
R547	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R548	1-216-665-11	s	METAL CHIP 3.9k 0.50% 1/10W
R549	1-216-698-11	s	METAL CHIP 91k 0.50% 1/10W
R550	1-216-680-11	s	METAL CHIP 16k 0.50% 1/10W
R551	1-216-681-11	s	METAL CHIP 18k 0.50% 1/10W
R552	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R553	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R565	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R566	1-216-661-11	s	METAL CHIP 2.7k 0.50% 1/10W
R567	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R570	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R571	1-216-687-11	s	METAL CHIP 33k 0.50% 1/10W
R581	1-216-634-11	s	METAL CHIP 200 0.50% 1/10W
R585	1-216-645-11	s	METAL CHIP 560 0.50% 1/10W
R586	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
R587	1-216-018-00	s	CHIP 51 5% 1/10W
R594	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R595	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R597	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R599	1-216-681-11	s	METAL CHIP 18k 0.50% 1/10W
R601	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R605	1-216-691-11	s	METAL CHIP 47k 0.50% 1/10W
R611	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R612	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R704	1-216-677-11	s	METAL CHIP 12k 0.50% 1/10W
R708	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R709	1-216-652-11	s	METAL CHIP 1.1k 0.50% 1/10W
R710	1-216-673-11	s	METAL CHIP 8.2k 0.50% 1/10W
R717	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R718	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R719	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R720	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R807	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R816	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R817	1-216-668-11	s	METAL CHIP 5.1k 0.50% 1/10W
RV100	1-237-515-21	s	VAR, CERMET 1k
RV101	1-237-514-21	s	VAR, CERMET 500
RV102	1-237-515-21	s	VAR, CERMET 1k
RV103	1-237-515-21	s	VAR, CERMET 1k
RV200	1-237-517-21	s	VAR, CERMET 5k
RV201	1-237-516-21	s	VAR, CERMET 2k
RV202	1-230-847-11	s	VAR, METAL FILM 500k
RV203	1-237-518-21	s	VAR, CERMET 10k
RV400	1-237-514-21	s	VAR, CERMET 500
RV401	1-237-516-21	s	VAR, CERMET 2k
RV402	1-237-515-21	s	VAR, CERMET 1k
RV500	1-237-516-21	s	VAR, CERMET 2k
RV501	1-237-516-21	s	VAR, CERMET 2k
RV502	1-237-517-21	s	VAR, CERMET 5k
RV503	1-237-518-21	s	VAR, CERMET 10k
RV610	1-237-515-21	s	VAR, CERMET 1k
S101	1-553-977-00	s	SLIDE
S200	1-553-977-00	s	SLIDE
TH201	1-800-198-XX	s	S-1K
TH202	1-800-202-XX	s	S-10K
TH501	1-800-198-XX	s	S-1K
TH502	1-800-202-XX	s	S-10K

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Ref.No.	Parts No.	SP	Description
TBC-7E BOARD			
	A-6727-094-B	o	MOUNTED CIRCUIT BOARD, TBC-7E
C100	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C102	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C103	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C105	1-135-076-21	s	TANTAL 1 10% 35V
C108	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C110	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C111	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C115	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C121	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C124	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C125	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C126	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C128	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C130	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C135	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C205	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C206	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C209	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C211	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C213	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C217	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C219	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C221	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C225	1-162-568-11	s	CERAMIC CHIP 0.33 25V
C226	1-162-638-11	s	CERAMIC CHIP 1 16V
C227	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C228	1-162-568-11	s	CERAMIC CHIP 0.33 25V
C229	1-162-638-11	s	CERAMIC CHIP 1 16V
C231	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C234	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C236	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C242	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C243	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C245	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C246	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C248	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C253	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C254	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C255	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C259	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C263	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C265	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C270	1-162-638-11	s	CERAMIC CHIP 1 16V
C271	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C273	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C276	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C277	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C281	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C284	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C288	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C290	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C291	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C293	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C295	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C302	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

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Ref.No.	Parts No.	SP	Description
C400	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C402	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C403	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C405	1-135-076-21	s	TANTAL 1 10% 35V
C408	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C412	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C418	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C419	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C421	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C422	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C424	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C504	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C509	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C511	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C521	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C522	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C524	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C526	1-162-638-11	s	CERAMIC CHIP 1 16V
C527	1-162-568-11	s	CERAMIC CHIP 0.33 25V
C529	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C531	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C533	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C535	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C536	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C537	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C540	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C542	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C545	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C548	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C550	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C555	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C558	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C559	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C566	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C569	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C575	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C578	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C581	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C583	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C600	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C611	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C612	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C613	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C615	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C651	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C701	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C704	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C706	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C708	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C750	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C801	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C804	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C805	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C807	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C902	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C905	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C908	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C911	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C914	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C917	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V

Ref.No.	Parts No.	SP	Description
C920	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C923	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C926	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C929	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C932	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C935	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
CN108	1-506-746-11	s	DIN 48P
CN109	1-506-748-11	s	DIN 96P
CN901	1-506-469-11	s	PIN, CONNECTOR 4P
CN902	1-506-471-11	o	PIN, CONNECTOR 6P
D100	8-719-105-82	s	RD5.1M-B2
D200	8-719-106-08	s	RD6.2M-B2
D202	8-719-915-43	s	FC54M
D203	8-719-915-43	s	FC54M
D204	8-719-915-43	s	FC54M
D205	8-719-938-98	s	FC51M
D206	8-719-938-98	s	FC51M
D207	8-719-938-98	s	FC51M
D208	8-719-101-23	s	1SS123
D209	8-719-100-03	s	1S2835
D210	8-719-105-82	s	RD5.1M-B2
D211	8-719-106-52	s	RD10M-B1
D212	8-719-938-98	s	FC51M
D213	8-719-938-98	s	FC51M
D214	8-719-100-03	s	1S2835
D400	8-719-105-82	s	RD5.1M-B2
D503	8-719-915-43	s	FC54M
D504	8-719-915-43	s	FC54M
D505	8-719-915-43	s	FC54M
D506	8-719-101-23	s	1SS123
D507	8-719-106-61	s	RD11M-B1
D508	8-719-105-82	s	RD5.1M-B2
D650	8-719-106-17	s	RD6.8M-B2
D680	8-719-101-23	s	1SS123
D700	8-719-100-03	s	1S2835
D704	8-719-105-82	s	RD5.1M-B2
D705	8-719-105-73	s	RD4.7M-B2
D706	8-719-101-23	s	1SS123
D707	8-719-106-17	s	RD6.8M-B2
DL500	1-415-309-00	s	350ns
FL100	1-236-006-13	s	LOW-PASS 7.0MHz
FL400	1-236-162-11	s	LOW-PASS 4.2MHz
IC101	8-749-901-45	s	SBX4002-01 (NEC)
IC102	8-759-908-15	s	TL431CLP (TI)
IC103	8-759-908-17	s	TL082CPS (TI)
IC105	8-752-032-55	s	CXA1096M (SONY)
IC108	8-759-948-32	s	CXD1310AM (SONY)
IC201	8-759-201-47	s	TA7357AP (TOSHIBA)
IC203	8-759-941-27	s	MB4002PF (FUJITSU)
IC205	8-759-941-27	s	MB4002PF (FUJITSU)
IC206	8-759-907-81	s	SN74LS221NS (TI)
IC207	8-759-908-17	s	TL082CPS (TI)

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

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Ref.No.	Parts No.	SP	Description
IC208	8-759-941-17	s	SN74LS06NS (TI)
IC209	8-759-012-00	s	MC10H116M (MOTOROLA)
IC210	8-759-012-13	s	MC10H125M (MOTOROLA)
IC211	8-759-230-23	s	CXD1045AQ (SONY)
IC212	8-749-901-21	s	BX1461 (SONY)
IC213	8-759-908-17	s	TL082CPS (TI)
IC214	8-759-945-29	s	TL601CPS (TI)
IC215	8-759-907-81	s	SN74LS221NS (TI)
IC216	8-749-901-20	s	BX1460 (SONY)
IC217	8-759-105-49	s	uPC319G2 (NEC)
IC218	8-759-239-58	s	TC74HC221AF (TOSHIBA)
IC219	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC220	8-759-908-17	s	TL082CPS (TI)
IC221	8-759-945-29	s	TL601CPS (TI)
IC222	8-759-100-97	s	uPC339G2 (NEC)
IC223	8-759-205-08	s	TC74HC86F (TOSHIBA)
IC224	8-759-204-98	s	TC74HC08F (TOSHIBA)
IC225	8-759-908-17	s	TL082CPS (TI)
IC226	8-759-945-29	s	TL601CPS (TI)
IC228	8-759-908-17	s	TL082CPS (TI)
IC231	8-759-204-98	s	TC74HC08F (TOSHIBA)
IC232	8-759-945-29	s	TL601CPS (TI)
IC234	8-759-205-17	s	TC74HC174F (TOSHIBA)
IC235	8-759-205-12	s	TC74HC157F (TOSHIBA)
IC236	8-759-205-12	s	TC74HC157F (TOSHIBA)
IC237	8-759-908-17	s	TL082CPS (TI)
IC238	8-759-907-81	s	SN74LS221NS (TI)
IC239	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC240	8-759-945-29	s	TL601CPS (TI)
IC241	8-759-100-93	s	uPC393G2 (NEC)
IC401	8-749-901-45	s	SBX4002-01 (NEC)
IC403	8-752-032-55	s	CXA1096M (SONY)
IC404	8-759-948-32	s	CXD1310AM (SONY)
IC501	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC502	8-759-201-47	s	TA7357AP (TOSHIBA)
IC504	8-759-908-17	s	TL082CPS (TI)
IC505	8-759-941-17	s	SN74LS06NS (TI)
IC506	8-759-012-13	s	MC10H125M (MOTOROLA)
IC507	8-759-230-23	s	CXD1045AQ (SONY)
IC508	8-749-901-21	s	BX1461 (SONY)
IC509	8-759-908-17	s	TL082CPS (TI)
IC510	8-759-945-29	s	TL601CPS (TI)
IC511	8-749-901-20	s	BX1460 (SONY)
IC512	8-759-907-81	s	SN74LS221NS (TI)
IC513	8-759-941-27	s	MB4002PF (FUJITSU)
IC514	8-759-945-29	s	TL601CPS (TI)
IC516	8-759-908-17	s	TL082CPS (TI)
IC517	8-759-908-17	s	TL082CPS (TI)
IC519	8-759-205-08	s	TC74HC86F (TOSHIBA)
IC520	8-759-945-29	s	TL601CPS (TI)
IC522	8-759-105-49	s	uPC319G2 (NEC)
IC523	8-759-908-17	s	TL082CPS (TI)
IC610	8-759-908-15	s	TL431CLP (TI)
IC611	8-759-908-17	s	TL082CPS (TI)
IC650	8-759-941-27	s	MB4002PF (FUJITSU)
IC700	8-759-945-29	s	TL601CPS (TI)
IC701	8-752-015-81	s	CX20158 (SONY)
IC702	8-752-332-67	s	CXD1217M (SONY)
IC720	8-759-204-98	s	TC74HC08F (TOSHIBA)
IC801	8-752-015-81	s	CX20158 (SONY)

Ref.No.	Parts No.	SP	Description
L102	1-410-470-11	s	MICRO 10
L103	1-410-470-11	s	MICRO 10
L104	1-410-470-11	s	MICRO 10
L205	1-408-880-00	s	MICRO 0.68
L214	1-410-492-11	s	MICRO 680
L219	1-410-461-41	s	MICRO 1.8
L402	1-410-470-11	s	MICRO 10
L403	1-410-470-11	s	MICRO 10
L406	1-410-470-11	s	MICRO 10
L508	1-408-880-00	s	MICRO 0.68
L900	1-421-329-00	s	CHOKE
L901	1-421-329-00	s	CHOKE
L902	1-421-329-00	s	CHOKE
L903	1-421-329-00	s	CHOKE
L904	1-421-329-00	s	CHOKE
L905	1-421-329-00	s	CHOKE
L906	1-421-329-00	s	CHOKE
L907	1-421-329-00	s	CHOKE
L908	1-421-329-00	s	CHOKE
L909	1-421-329-00	s	CHOKE
L910	1-421-329-00	s	CHOKE
L911	1-421-329-00	s	CHOKE
LV200	1-407-563-00	s	VAR 1
LV201	1-407-564-00	s	VAR 1.5
LV500	1-407-563-00	s	VAR 1
Q100	8-729-100-66	s	2SC1623
Q101	8-729-106-68	s	2SD1615A-GP
Q102	8-729-106-60	s	2SB1115A
Q103	8-729-102-07	s	2SC2223-F13
Q104	8-729-102-07	s	2SC2223-F13
Q105	8-729-109-43	s	2SK94-X3
Q106	8-729-102-07	s	2SC2223-F13
Q201	8-729-100-66	s	2SC1623
Q203	8-729-100-66	s	2SC1623
Q204	8-729-100-66	s	2SC1623
Q205	8-729-100-66	s	2SC1623
Q206	8-729-100-66	s	2SC1623
Q207	8-729-100-66	s	2SC1623
Q208	8-729-109-43	s	2SK94-X3
Q211	8-729-102-07	s	2SC2223-F13
Q212	8-729-102-07	s	2SC2223-F13
Q213	8-729-109-43	s	2SK94-X3
Q214	8-729-102-07	s	2SC2223-F13
Q215	8-729-100-76	s	2SA812
Q220	8-729-109-43	s	2SK94-X3
Q221	8-729-109-43	s	2SK94-X3
Q222	8-729-202-38	s	2SC3326N
Q223	8-729-800-44	s	2SK152-4
Q224	8-729-900-53	s	DTC114EK
Q225	8-729-900-53	s	DTC114EK
Q226	8-729-900-53	s	DTC114EK
Q227	8-729-900-53	s	DTC114EK
Q228	8-729-900-53	s	DTC114EK
Q229	8-729-202-38	s	2SC3326N
Q230	8-729-202-38	s	2SC3326N

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Ref.No.	Parts No.	SP	Description
Q400	8-729-100-66	s	2SC1623
Q401	8-729-102-07	s	2SC2223-F13
Q402	8-729-102-07	s	2SC2223-F13
Q403	8-729-109-43	s	2SK94-X3
Q404	8-729-102-07	s	2SC2223-F13
Q500	8-729-100-66	s	2SC1623
Q501	8-729-100-66	s	2SC1623
Q503	8-729-100-66	s	2SC1623
Q504	8-729-100-66	s	2SC1623
Q505	8-729-100-66	s	2SC1623
Q512	8-729-102-07	s	2SC2223-F13
Q513	8-729-109-43	s	2SK94-X3
Q514	8-729-102-07	s	2SC2223-F13
Q515	8-729-102-07	s	2SC2223-F13
Q516	8-729-100-76	s	2SA812
Q610	8-729-106-68	s	2SD1615A-GP
Q611	8-729-106-60	s	2SB1115A
Q680	8-729-109-43	s	2SK94-X3
Q681	8-729-100-66	s	2SC1623
Q800	8-729-109-43	s	2SK94-X3
Q801	8-729-109-43	s	2SK94-X3
Q802	8-729-100-66	s	2SC1623
Q803	8-729-109-43	s	2SK94-X3
R101	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R105	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R106	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R107	1-216-641-11	s	METAL CHIP 390 0.50% 1/10W
R111	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R114	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R115	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R135	1-216-643-11	s	METAL CHIP 470 0.50% 1/10W
R139	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
R140	1-216-653-11	s	METAL CHIP 1.2k 0.50% 1/10W
R142	1-216-018-11	s	CHIP 51 5% 1/10W
R149	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R205	1-216-665-11	s	METAL CHIP 3.9k 0.50% 1/10W
R213	1-216-653-11	s	METAL CHIP 1.2k 0.50% 1/10W
R218	1-216-669-11	s	METAL CHIP 5.6k 0.50% 1/10W
R219	1-216-691-11	s	METAL CHIP 47k 0.50% 1/10W
R220	1-216-674-11	s	METAL CHIP 9.1k 0.50% 1/10W
R222	1-216-660-11	s	METAL CHIP 2.4k 0.50% 1/10W
R249	1-216-682-11	s	METAL CHIP 20k 0.50% 1/10W
R250	1-216-669-11	s	METAL CHIP 5.6k 0.50% 1/10W
R251	1-216-682-11	s	METAL CHIP 20k 0.50% 1/10W
R252	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R254	1-216-695-11	s	METAL CHIP 68k 0.50% 1/10W
R258	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R259	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R264	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R267	1-216-665-11	s	METAL CHIP 3.9k 0.50% 1/10W
R270	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R271	1-216-680-11	s	METAL CHIP 16k 0.50% 1/10W
R272	1-216-681-11	s	METAL CHIP 18k 0.50% 1/10W
R276	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R288	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R293	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R294	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R296	1-216-669-11	s	METAL CHIP 5.6k 0.50% 1/10W

Ref.No.	Parts No.	SP	Description
R302	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
R303	1-216-645-11	s	METAL CHIP 560 0.50% 1/10W
R304	1-216-018-00	s	CHIP 51 5% 1/10W
R312	1-216-649-11	s	METAL CHIP 820 0.50% 1/10W
R313	1-216-661-11	s	METAL CHIP 2.7k 0.50% 1/10W
R314	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R316	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R317	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R330	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R337	1-216-661-11	s	METAL CHIP 2.7k 0.50% 1/10W
R338	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R340	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R341	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R348	1-216-681-11	s	METAL CHIP 18k 0.50% 1/10W
R353	1-216-662-11	s	METAL CHIP 3k 0.50% 1/10W
R354	1-216-665-11	s	METAL CHIP 3.9k 0.50% 1/10W
R355	1-216-693-11	s	METAL CHIP 56k 0.50% 1/10W
R356	1-216-672-11	s	METAL CHIP 7.5k 0.50% 1/10W
R357	1-216-677-11	s	METAL CHIP 12k 0.50% 1/10W
R358	1-216-673-11	s	METAL CHIP 8.2k 0.50% 1/10W
R359	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R360	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R361	1-216-672-11	s	METAL CHIP 7.5k 0.50% 1/10W
R367	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R368	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R371	1-216-652-11	s	METAL CHIP 1.1k 0.50% 1/10W
R372	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R375	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R376	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R379	1-216-685-11	s	METAL CHIP 27k 0.50% 1/10W
R380	1-216-666-11	s	METAL CHIP 4.3k 0.50% 1/10W
R401	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R405	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R406	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R407	1-216-643-11	s	METAL CHIP 470 0.50% 1/10W
R411	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R412	1-216-669-11	s	METAL CHIP 5.6k 0.50% 1/10W
R426	1-216-677-11	s	METAL CHIP 12k 0.50% 1/10W
R431	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
R432	1-216-653-11	s	METAL CHIP 1.2k 0.50% 1/10W
R433	1-216-018-00	s	CHIP 51 5% 1/10W
R438	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R507	1-216-634-11	s	METAL CHIP 200 0.50% 1/10W
R509	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
R510	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
R511	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
R512	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R513	1-216-619-11	s	METAL CHIP 47 0.50% 1/10W
R517	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R518	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R522	1-216-691-11	s	METAL CHIP 47k 0.50% 1/10W
R523	1-216-699-11	s	METAL CHIP 100k 0.50% 1/10W
R527	1-216-674-11	s	METAL CHIP 9.1k 0.50% 1/10W
R528	1-216-660-11	s	METAL CHIP 2.4k 0.50% 1/10W
R535	1-216-682-11	s	METAL CHIP 20k 0.50% 1/10W
R536	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R541	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R543	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R544	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R545	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

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Ref.No.	Parts No.	SP	Description
R547	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R548	1-216-665-11	s	METAL CHIP 3.9k 0.50% 1/10W
R549	1-216-698-11	s	METAL CHIP 91k 0.50% 1/10W
R550	1-216-680-11	s	METAL CHIP 16k 0.50% 1/10W
R551	1-216-681-11	s	METAL CHIP 18k 0.50% 1/10W
R552	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R553	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R565	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R566	1-216-661-11	s	METAL CHIP 2.7k 0.50% 1/10W
R567	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R570	1-216-669-11	s	METAL CHIP 5.6k 0.50% 1/10W
R570	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R571	1-216-687-11	s	METAL CHIP 33k 0.50% 1/10W
R581	1-216-634-11	s	METAL CHIP 200 0.50% 1/10W
R585	1-216-645-11	s	METAL CHIP 560 0.50% 1/10W
R586	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
R587	1-216-018-00	s	CHIP 51 5% 1/10W
R594	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R595	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R597	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R599	1-216-681-11	s	METAL CHIP 18k 0.50% 1/10W
R601	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R605	1-216-691-11	s	METAL CHIP 47k 0.50% 1/10W
R611	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R612	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R704	1-216-677-11	s	METAL CHIP 12k 0.50% 1/10W
R708	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R709	1-216-652-11	s	METAL CHIP 1.1k 0.50% 1/10W
R710	1-216-673-11	s	METAL CHIP 8.2k 0.50% 1/10W
R717	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R718	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R719	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R720	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R807	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R816	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R817	1-216-668-11	s	METAL CHIP 5.1k 0.50% 1/10W
RV100	1-237-515-21	s	VAR, CERMET 1k
RV101	1-237-514-21	s	VAR, CERMET 500
RV102	1-237-515-21	s	VAR, CERMET 1k
RV103	1-237-515-21	s	VAR, CERMET 1k
RV200	1-237-517-21	s	VAR, CERMET 5k
RV201	1-237-516-21	s	VAR, CERMET 2k
RV202	1-230-847-11	s	VAR, CERMET 500k
RV203	1-237-518-21	s	VAR, CERMET 10k
RV400	1-237-514-21	s	VAR, CERMET 500
RV401	1-237-516-21	s	VAR, CERMET 2k
RV402	1-237-515-21	s	VAR, CERMET 1k
RV500	1-237-516-21	s	VAR, CERMET 2k
RV501	1-237-516-21	s	VAR, CERMET 2k
RV502	1-237-517-21	s	VAR, CERMET 5k
RV503	1-237-518-21	s	VAR, CERMET 10k
RV610	1-237-515-21	s	VAR, CERMET 1k
S101	1-553-977-00	s	SLIDE
S200	1-553-977-00	s	SLIDE

Ref.No.	Parts No.	SP	Description
TH201	1-800-198-XX	s	S-1K
TH202	1-800-202-XX	s	S-10K
TH501	1-800-198-XX	s	S-1K
TH502	1-800-202-XX	s	S-10K

19) TBC-7P BOARD

5) This board includes the SW-261 board.

A-6711-888-B o MOUNTED CIRCUIT BOARD, TBC-7P

Ref.No.	Parts No.	SP	Description
C100	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C102	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C103	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C105	1-135-076-21	s	TANTAL CHIP 1 10% 35V
C108	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C110	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C111	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C115	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C121	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C124	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C125	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C126	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C128	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C130	1-163-033-00	s	CERAMIC CHIP 0.022 50V
6) C135	1-163-037-00	s	CERAMIC CHIP 0.022 10% 25V
C205	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C206	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C209	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C211	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C213	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C217	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C219	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C221	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C225	1-162-568-11	s	CERAMIC CHIP 0.33 25V
C226	1-162-638-11	s	CERAMIC CHIP 1 16V
C227	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C228	1-162-568-11	s	CERAMIC CHIP 0.33 25V
C229	1-162-638-11	s	CERAMIC CHIP 1 16V
C231	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C234	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C236	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C242	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C243	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C245	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C246	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C248	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C253	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C254	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C255	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C259	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C263	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C265	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C270	1-162-638-11	s	CERAMIC CHIP 1 16V
C271	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C273	1-163-033-00	s	CERAMIC CHIP 0.022 50V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

TBC-9P BOARD

Ref.No.	Parts No.	SP	Description
1)	A-6711-890-A	o	MOUNTED CIRCUIT BOARD, TBC-9P
2)	A-6711-890-B	o	MOUNTED CIRCUIT BOARD, TBC-9P
C3	1-162-638-11	s	CERAMIC CHIP 1 16V
C4	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C5	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C9	1-135-083-00	s	TANTAL CHIP 0.47 10% 25V
C10	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C13	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C15	1-124-462-00	s	ELECT 10 20% 16V
C17	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C19	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C20	1-135-083-00	s	TANTAL CHIP 0.47 10% 25V
C21	1-124-462-00	s	ELECT 10 20% 16V
C22	1-124-462-00	s	ELECT 10 20% 16V
C24	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C25	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C27	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C32	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C33	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C35	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C36	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C38	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C39	1-162-638-11	s	CERAMIC CHIP 1 16V
C41	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C43	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C45	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C47	1-162-638-11	s	CERAMIC CHIP 1 16V
C49	1-163-241-00	s	CERAMIC CHIP 39pF 5% 50V
C50	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C52	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C55	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C59	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C60	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C64	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C66	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C73	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C75	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C77	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C79	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C81	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C83	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C86	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C89	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C91	1-135-083-00	s	TANTAL CHIP 0.47 10% 25V
C92	1-124-462-00	s	ELECT 10 20% 16V
C93	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C96	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C98	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C99	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C101	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C102	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C103	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C104	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C105	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C106	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C107	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C108	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C109	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C111	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C113	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C114	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C115	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C117	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C119	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C123	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C124	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C125	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C126	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C127	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C129	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C132	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C134	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C137	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
** C141	1-163-134-00	s	CERAMIC CHIP 510pF
C200	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C201	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C203	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C204	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C208	1-135-091-00	s	TANTAL CHIP 1 10% 16V
C210	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C214	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C215	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C216	1-135-096-91	s	TANTAL CHIP 4.7 20% 10V
C301	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C302	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
5) CN101	1-506-748-31	s	DIN 96P
6) CN101	1-506-748-11	s	DIN 96P
CP1	1-579-103-21	s	OSCILLATOR 17.734475MHz
CP2	1-577-294-11	s	OSCILLATOR 14.1875MHz
CP3	1-577-294-11	s	OSCILLATOR 14.1875MHz
D1	8-719-100-03	s	1S2835
D2	8-719-101-23	s	1SS123
D3	8-719-101-23	s	1SS123
D4	8-719-101-23	s	1SS123
D5	8-719-101-23	s	1SS123
D200	8-719-101-23	s	1SS123
D201	8-719-105-58	s	RD3.9M-B2
D202	8-719-101-23	s	1SS123
D203	8-719-100-03	s	1S2835
D204	8-719-106-08	s	RD6.2M-B2
D205	8-719-911-19	s	1SS119
IC1	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC2	8-752-006-12	s	CX20061 (SONY)
IC4	8-752-335-47	s	CXD1216M (SONY)
IC5	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC6	8-752-332-67	s	CXD1217M (SONY)
IC7	8-759-239-58	s	TC74HC221AF (TOSHIBA)
IC8	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC9	8-759-239-58	s	TC74HC221AF (TOSHIBA)
IC10	8-752-332-67	s	CXD1217M (SONY)
IC11	8-759-205-08	s	TC74HC86F (TOSHIBA)

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	Ref.No.	Parts No.	SP	Description
	IC111	8-759-937-61	s	S-81230AG (SEIKO I AND E)
	IC112	8-759-708-05	s	NJM78L05A (JRC)
	IC113	8-759-700-65	s	NJM79L05A (JRC)
**	IC601	8-752-050-00	s	CX20111 (SONY)
**	IC602	8-752-050-00	s	CX20111 (SONY)
	IC603	8-759-207-74	s	TC4030BFHB (TOSHIBA)
	IC604	8-759-700-43	s	NJM4558M (JRC)
	IC605	8-759-205-78	s	TC504013BF (TOSHIBA)
	IC606	8-759-200-90	s	TC4538BF (TOSHIBA)
	IC700	8-759-941-27	s	MB4002PF (FUJITSU)
1)	IC701	8-759-929-73	s	SN74LS00NS (TI)
2)	IC701	8-759-929-80	s	SN74LS08NS (TI)
	IC702	8-749-938-10	s	BX381 (SONY)
	IC703	8-759-908-17	s	TL082CPS (TI)
	IC704	8-759-100-93	s	uPC393G2 (JRC)
	IC705	8-759-008-52	s	MC74HC123AF (MOTOROLA)
	IC706	8-759-947-82	s	TL610CPS (TI)
	IC707	8-752-015-81	s	CX20158 (SONY)
	IC708	8-759-929-78	s	SN74LS04NS (TI)
	L1	1-421-329-00	s	CHOKE
	L2	1-421-329-00	s	CHOKE
	L3	1-421-329-00	s	CHOKE
	L4	1-421-329-00	s	CHOKE
	L5	1-421-329-00	s	CHOKE
	L7	1-410-478-11	s	MICRO 47
	L8	1-410-478-11	s	MICRO 47
	L9	1-410-478-11	s	MICRO 47
	L12	1-410-478-11	s	MICRO 47
	L13	1-410-478-11	s	MICRO 47
	L14	1-410-478-11	s	MICRO 47
2)	L17	1-410-482-31	s	MICRO 100
	L19	1-410-467-21	s	MICRO 5.6
1)	L20	1-410-471-11	s	MICRO 12
	L701	1-410-478-11	s	MICRO 47
	L702	1-410-478-11	s	MICRO 47
	L703	1-410-478-11	s	MICRO 47
	L704	1-410-478-11	s	MICRO 47
	LV1	1-407-575-00	s	VAR 100
	LV2	1-407-575-00	s	VAR 100
1)	Q1	8-729-201-27	s	2SC2715-Y
2)	Q1	8-729-100-66	s	2SC1623
1)	Q2	8-729-201-27	s	2SC2715-Y
2)	Q2	8-729-100-66	s	2SC1623
	Q3	8-729-931-02	s	2SC2413KQ
	Q4	8-729-931-02	s	2SC2413KQ
	Q5	8-729-931-02	s	2SC2413KQ
	Q6	8-729-102-07	s	2SC2223-F13
	Q7	8-729-931-02	s	2SC2413KQ
	Q8	8-729-931-02	s	2SC2413KQ
	Q9	8-729-931-02	s	2SC2413KQ
	Q10	8-729-931-02	s	2SC2413KQ
1)	Q11	8-729-201-27	s	2SC2715-Y
2)	Q11	8-729-907-27	s	IMX1
	Q12	8-729-931-02	s	2SC2413KQ

	Ref.No.	Parts No.	SP	Description
1)	Q13	8-729-122-63	s	2SA1226
	Q14	8-729-931-02	s	2SC2413KQ
	Q15	8-729-122-63	s	2SA1226
	Q16	8-729-931-02	s	2SC2413KQ
	Q17	8-729-931-02	s	2SC2413KQ
	Q18	8-729-931-02	s	2SC2413KQ
1)	Q19	8-729-312-22	s	2SA1122D
2)	Q19	8-712-100-76	s	2SA812
	Q20	8-729-931-02	s	2SC2413KQ
	Q25	8-729-931-02	s	2SC2413KQ
1)	Q26	8-729-312-22	s	2SA1122D
1)	Q27	8-729-312-22	s	2SA1122D
2)	Q27	8-712-100-76	s	2SA812
	Q28	8-729-102-60	s	2SC1623
2)	Q30	8-729-904-41	s	FMY3
	Q31	8-729-122-63	s	2SA1226
	Q32	8-729-931-02	s	2SC2413KQ
	Q40	8-729-901-06	s	DTC144EK
1)	Q401	8-729-102-60	s	2SC1623
2)	Q501	8-712-100-76	s	2SA812
2)	Q502	8-712-100-76	s	2SA812
2)	Q503	8-729-902-96	s	FMS1
2)	Q504	8-729-903-10	s	FMW1
	Q601	8-729-271-22	s	2SC2712-G
	Q602	8-729-271-22	s	2SC2712-G
	Q603	8-729-271-22	s	2SC2712-G
	Q604	8-729-271-22	s	2SC2712-G
	Q605	8-729-271-22	s	2SC2712-G
1)	Q606	8-729-901-06	s	DTC144EK
	Q700	8-729-931-02	s	2SC2413KQ
	Q701	8-729-931-02	s	2SC2413KQ
1)	Q702	8-729-201-27	s	2SC2715-Y
2)	Q702	8-729-100-66	s	2SC1623
1)	Q703	8-729-201-27	s	2SC2715-Y
2)	Q703	8-729-100-66	s	2SC1623
	R1	1-216-638-11	s	METAL CHIP 300 0.50% 1/10W
	R2	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
	R4	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
	R5	1-216-641-11	s	METAL CHIP 390 0.50% 1/10W
	R7	1-216-647-11	s	METAL CHIP 680 0.50% 1/10W
	R8	1-216-641-11	s	METAL CHIP 390 0.50% 1/10W
	R11	1-216-641-11	s	METAL CHIP 390 0.50% 1/10W
	R14	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
	R15	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
1)	R16	1-216-643-11	s	METAL CHIP 470 0.50% 1/10W
2)	R16	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
7)	R17	1-216-649-11	s	METAL CHIP 820 0.50% 1/10W
8)	R17	1-216-650-11	s	METAL CHIP 910 0.50% 1/10W
1)	R18	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
2)	R18	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
1)	R19	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
1)	R20	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
1)	R21	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
1)	R26	1-216-640-11	s	METAL CHIP 360 0.50% 1/10W
2)	R26	1-216-643-11	s	METAL CHIP 470 0.50% 1/10W
1)	R27	1-216-640-11	s	METAL CHIP 360 0.50% 1/10W
2)	R27	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
	R30	1-216-677-11	s	METAL CHIP 12k 0.50% 1/10W
	R31	1-216-645-11	s	METAL CHIP 560 0.50% 1/10W
	R32	1-216-627-11	s	METAL CHIP 47 0.50% 1/10W

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19-4. PACKING MATERIAL AND ACCESSORIES (SUPPLIED)

	Parts No.	SP	Description
	A-6729-474-A	s	MOUNTED PCB, EX-116
	A-6729-475-A	s	MOUNTED PCB, EX-134
	A-6729-476-A	s	MOUNTED PCB, EX-151
	1-555-873-13	s	CABLE, REMOTE CONTROL 9P
⚠	1-590-910-11	s	CORD, POWER (3 CORE)(for EK)
	1-551-812-00	s	CORD, POWER (3 CORE)(for UC)
	2-237-802-01	s	CUSHION
	3-701-616-00	s	BAG, POLY
	3-701-623-00	s	BAG, POLY
	3-701-630-00	s	BAG, POLY
	3-701-632-00	s	BAG, POLY
	3-701-649-00	s	BAG, POLY
**	3-721-869-05	o	CUSHION, UPPER
	3-721-870-03	o	CUSHION, LOWER
	3-721-888-01	o	SPACER
	3-721-889-01	o	SLEEVE, A
	3-721-890-01	o	SLEEVE, B
	3-721-891-01	o	SPACER, A
	3-721-892-01	o	SPACER, B
	3-725-092-02	o	INDIVIDUAL CARTON

19-5. FIXTURE (OPTION)

	Parts No.	SP	Description
	J-6001-820-A	s	DRUM ECCENTRICITY GAUGE (3)
	J-6001-830-A	s	DRUM ECCENTRICITY GAUGE (2)
	J-6001-840-A	s	DRUM ECCENTRICITY GAUGE (1)
	J-6031-820-A	s	MULTI CONNECTOR CABLE (DIBNC)
	J-6080-011-A	s	REEL TABLE TENSION GAUGE
	J-6086-570-A	s	FLATNESS PLATE
	J-6087-000-A	s	DRUM ECCENTRICITY GAUGE (5)
	J-6152-450-A	s	WIRE CLEARANCE GAUGE
	J-6190-800 A	s	TENSION REGULATOR SLANTNESS CHECK GAUGE
	J-6320-680-A	s	REEL TABLE HEIGHT GAUGE
	J-6320-870-A	s	REEL MOTOR SHAFT SLANTNESS CHECK GAUGE
**	J-6320-880-A	s	CASSETTE REFERENCE PLATE
**	2-034-697-00	s	CLEANING PIECE
	7-723-902-00	s	INSPECTION MIRROR
	7-732-050-20	s	TENSION SCALE (50G FULL SCALE)
	7-732-050-30	s	TENSION SCALE (100G FULL SCALE)
	8-960-096-51	s	ALIGNMENT TAPE, CR2-1B PS
	8-960-096-86	s	ALIGNMENT TAPE, CR8-1B PS
	8-960-096-91	s	ALIGNMENT TAPE, CR5-1B PS
	8-960-098-44	s	ALIGNMENT TAPE, CR5-2A PS
	8-960-098-45	s	ALIGNMENT TAPE, CR8-1A PS
	9-911-053-00	s	THICKNESS GAUGE
**	9-919-573-01	s	CLEANING FLUID
	Standard products		HEAD DEMAGNETIZER (HE-4)

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